

TRANSACTIONS

OF THE

ROYAL SOCIETY OF EDINBURGH.

VOL. I.

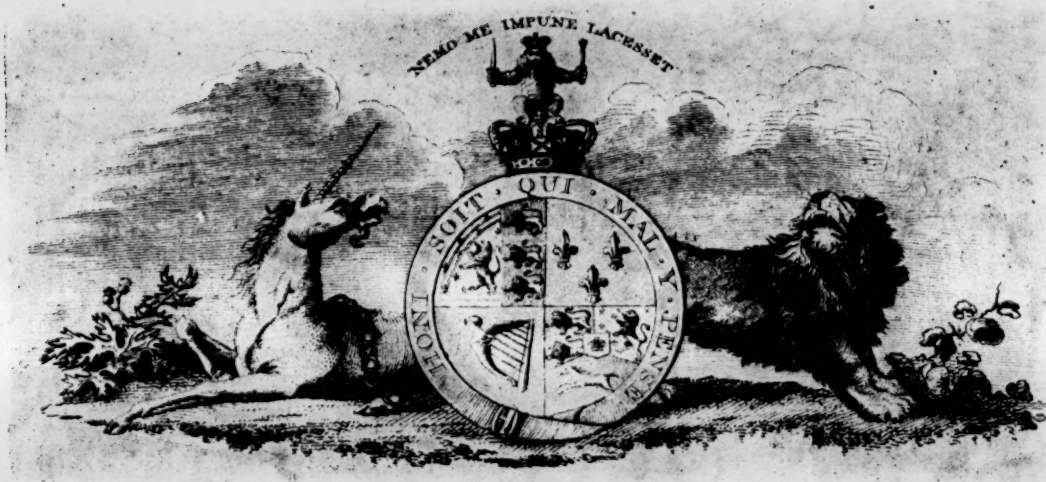


EDINBURGH:

PRINTED FOR J. DICKSON, BOOKSELLER TO THE ROYAL SOCIETY.

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TO THE
K I N G.

S I R,

I AM desired by the Members of The Royal Society of Edinburgh, humbly to request Your MAJESTY to accept the first fruits of their Philosophical and Literary labours.

To

To Your MAJESTY, as the Founder and Patron of the Society, they, of right, should be presented.

IF they shall be found worthy of the approbation of a MONARCH, who has distinguished His Reign by the utility of His Institutions for improving the elegant Arts, as well as by the splendour and success of His undertakings to extend the knowledge of Nature, The Royal Society of Edinburgh may hope to occupy a respectable place among those Bodies of learned Men, who, by their united efforts, have contributed,

DEDICATION. xi

buted, so eminently, to the progress of
Science and of Taste in Europe. I am,
with the highest respect,

Your MAJESTY's dutiful subject,

and devoted servant,

BUCCLEUGH.

HISTORY

OF

THE SOCIETY.

(1782-1783).

THE institution of Societies of learned men, who have united their labours for the cultivation of Philosophy, or of Literature, is of an ancient date in several polished nations of Europe. It is, however, for the honour of Great Britain to have set the first example of an institution for these purposes, incorporated by charter from the Sovereign, and carrying on its researches under his patronage. A hint of this kind, to the Prince then reigning, is found in the works of Lord BACON,* who recommends, as one of the *opera verè basilica*, the establishment of Academies or Societies of learned men, who should give, from time to time, a regular account to the world of their researches and discoveries. It was the idea of this great philosopher, that the learned world should be united, as it were, in one immense republic, which, though consisting of many detached states, should hold a strict union and preserve a mutual intelligence with each other, in every thing that regarded the common interest. The want of this union and intelligence he laments as one of the chief obstacles to the advancement of science; and, justly considering the institution of public societies, in the different countries of Europe, under the auspices of the Sovereign, to be the best remedy for that defect, he has given, in his fanciful work of the *New Atlantis*, the delineation of a Philosophical Society, on the most extended plan, for the improvement of all arts and sciences; a work, which, though written in the language, and tinged with the colouring of romance, is full of the noblest philosophic views. The plan of Lord BACON, which met with little attention from the age in which he lived,

* BACON, *De Augment. Scient.* l. 2.

was destined to produce its effect in a period not very distant. The scheme of a Philosophical College, by COWLEY, is acknowledged to have had a powerful influence in procuring the establishment of the Royal Society of London, by charter from CHARLES II.* and COWLEY's plan is manifestly copied, in almost all its parts, from that in the *New Atlantis*. The institution of the Royal Society of London was soon followed by the establishment of the Royal Academy of Science at Paris; and these two have served as models to the Philosophical Academies of highest reputation in the other kingdoms of Europe.

In Scotland, similar associations for the advancement of science and of literature have, even without the benefit of Royal patronage, and with no other support than the abilities of their members, attained to no common degree of reputation.

In Edinburgh, a Society was instituted in 1731, for the improvement of medical knowledge, by collecting and publishing Essays and Observations on the various branches of Medicine and Surgery, written by the members themselves, or communicated to them. The Secretary of this Society was the elder Dr ALEXANDER MONRO, the first professor of Anatomy in the University of Edinburgh, and the founder of the medical school which has since attained to such eminence and celebrity. Under his care, the Transactions of this Society were published at different periods, in five volumes 8vo, with the title of *Medical Essays and Observations, &c.*; a work which has undergone many editions, which has been translated into many foreign languages, and is honoured with the encomium of HALLER, as one of the most useful books in the sciences of Medicine, Anatomy, and Surgery.

Soon after the publication of the above mentioned volumes of Medical Essays, viz., in 1739, the celebrated Mr MACLAURIN, professor of Mathematics in the University of Edinburgh, conceived the idea of enlarging the plan of this society, by extending it to subjects of Philosophy and Literature. The institution was accordingly new-modelled, by a printed set of laws and regulations, the number of members was increased, and they were distinguished, from that time, by the title of "The Society for improving Arts and Sciences," or, more generally, by the title of "The Philosophical Society of Edinburgh." They chose for their President JAMES Earl of Morton, afterwards President of the Royal Society of London: Sir JOHN CLERK of Pennycuik, one of the Barons of Exchequer, and Dr JOHN CLERK, were elected Vice-presidents; and Mr MACLAURIN and Dr PLUMMER Secretaries of the institution. The ordinary

* SPRAT'S *History of the Royal Society of London*, 2d edit. p. 59.

members were some of the most distinguished men of letters in Scotland at that time.

A few years after the Society had received its new form, its meetings were interrupted, for a considerable space of time, by the disorders of the country during the rebellion in 1745; and no sooner was the public tranquillity re-established, than it suffered a severe loss by the death of Mr MACLAURIN, whose comprehensive genius, and ardour in the pursuits of science, peculiarly qualified him for conducting the business of an institution of this nature. The meetings of the Society, however, were renewed about the year 1752; and the new Secretaries, who were the celebrated Mr DAVID HUME and Dr ALEXANDER MONRO, junior, were directed to arrange and prepare for the press such papers as were judged worthy of being submitted to the public eye. The first volume of the Transactions of the Philosophical Society of Edinburgh was accordingly published in 1754, under the title of *Essays and Observations, Physical and Literary*; the second volume was published in 1756, and the third in 1771.

It has been always observed, that institutions of this kind have their intervals of languor, as well as their periods of brilliancy and activity. Every associated body must receive its vigour from a few zealous and spirited individuals, who find a pleasure in that species of business, which, were it left to the care of the members in general, would be often reluctantly submitted to, and always negligently executed. The temporary avocations, and, still more, the deaths of such men, have the most sensible effect on the societies to which they belonged. The principle of activity which animated them, if not utterly extinguished, remains long dormant, and a kindred genius is required to call it forth into life.

From causes of this kind, the Philosophical Society of Edinburgh, though its meetings were not altogether discontinued, appears to have languished for some time, till about the year 1777, when its meetings became more frequent, and, from the uncommon zeal and distinguished abilities of the late HENRY HOME, Lord KAIMES, at that time elected President of the institution, its business was conducted with renewed ardour and success.

About the end of the year 1782, in a meeting of the Professors of the University of Edinburgh, many of whom were likewise members of the Philosophical Society, and warmly attached to its interests, a scheme was proposed by the Reverend Dr ROBERTSON, Principal of the University, for the establishment of a New Society on a more extended plan, and after the model of some of the foreign Academies, which have for their object the cultivation of every

branch of science, erudition and taste. It appeared an expedient measure to solicit the Royal Patronage to an institution of this nature, which promised to be of national importance, and to request an establishment by charter from the Crown. The plan was approved and adopted; and the Philosophical Society, joining its influence as a body, in seconding the application from the University, his Majesty was most graciously pleased to incorporate THE ROYAL SOCIETY OF EDINBURGH, by the following Charter :—

GEORGIUS, Dei Gratia, Magnæ Britanniae, Franciæ, et Hiberniæ Rex, Fidei Defensor, OMNIBUS probis hominibus, ad quos præsentēs Literæ nostræ pervenerint, Salutem. QUANDOQUIDEM, Nos considerantes quod Petitio humilis Nobis oblata fuerit, a Henrico Duce de Buccleugh, Roberto Dundas Armigero, Domino Præsidi Curiae Sessionis; Jacobo Montgomery Armigero, Domino Capitali Barone Curiae Scaccarii in Scotia; Thoma Miller Armigero, Domino Justitiario Clerico; Joanne Grieve Armigero, Domino Præposito Civitatis Edinensis; Domino Alexandro Dick Baronetto; Domino Georgio Clerk Baronetto; Reverendo Gulielmo Robertson, S. S. Theologiæ Doctore, Academiæ Edinensis Præfecto; Gulielmo Cullen et Alexandro Monro, Medicinæ Doctoribus; Hugone Blair et Joanne Walker, S. Theologiæ Doctoribus; Adamo Ferguson, Legum Doctore, et Andrea Dalzel, Joanne Robison, et Allano Maconochie, in Academia Edinensi Professoribus; Ilay Campbell Armigero, Solicitatore nostro Generali pro Regno Scotiæ; Jacobo Hunter-Blair et Adamo Smith, Armigeris, et Joanne Maclaurin, Gulielmo Nairne, et Roberto Cullen, Armigeris, Advocatis; ab iis scilicet, atque in eorum nomine: In qua Petitione enarratur, Eruditorum hominum Societates usu compertas esse admodum idoneas ad promovendam Scientiam, et bonum de re Literaria Judicium, ubicunque gentium institutæ fuerint; Atque adeo multos esse homines, aut Loco aut Literis eminentes, qui votum diu extulerint, ut Societas Literaria Edinburgi institueretur, ad Statum illius partis Imperii nostri quæ Scotia vocatur accommodata, persuasissimum habentes ejusdem Labores et Indagationes emolumento Reipublicæ haud aspernando futuras: Quem ad finem Petitores supradictos spectantes Societatem inter se, si modo Patrocinio nostro digni haberentur, inire constituisse, eosdemque submissee sperare Nobis pro gratia nostra placitum, ut eos in unum Corpus formemus, una cum aliis quicunque in eorum numerum sint cooptandi, ad Societatem constituendam, quæ non solum in Scientiis Matheseos, Physices, Chemiæ, Medicinæ et Historiæ Naturalis, verum etiam in iis quæ ad Archæologiam, Philologiam et Literaturam spectant, versetur: Precantes igitur, ut iis concedamus regiam nostram Cartam, seu

Literas patentes, sub Sigillo intus script. Nominantem, Constituentem, Erigentem, et Incorporantem dictos Petitores, et alios quales postea assumentur seu eligentur Socii, In unum Corpus Politicum et Corporatum, seu iegalem Incorporationem, per Nomen et Titulum, et sub Ordinationibus in his postea dictis: ET NOS certiores facti Consilium Petitorum esse laudabile et dignum quod promoveatur: IGITUR Constituimus, Ereximus et Incorporavimus, sicuti Nos, regia nostra prerogativa, et Gratia speciali, pro Nobismetipsis nostrisque regiis Successoribus, per has præsentes, Constituimus, Erigimus, et Incorporamus PRÆFATOS Henricum Ducem de Buccleugh; Robertum Dundas Armigerum, Dominum Præsidem Curiae Sessionis; Jacobum Montgomery Armigerum, Dominum Capitem Baronem Curiae Scaccarii in Scotia; Thomam Miller Armigerum, Dominum Justitiarium Clericum; Joannem Grieve Armigerum, Dominum Præpositum Civitatis Edinensis; Dominum Alexandrum Dick Baronettum; Dominum Georgium Clerk Baronettum; Reverendum Gulielmum Robertson, S. S. Theologiae Doctorem, Academiae Edinensis Præfectum; Gulielmum Cullen et Alexandrum Monro, Medicinae Doctores; Hugonem Blair et Joannem Walker, S. Theologiae Doctores; Adamum Ferguson, Legum Doctorem, et Andream Dalzel, Joannem Robison et Allanum Maconochie, in Academia Edinensi Professores; Ilay Campbell Armigerum, nostrum Solicitorem Generalem pro Regno Scotiae; Jacobum Hunter-Blair et Adamum Smith, Armigeros, et Joannem Maclaurin, Gulielmum Nairne, et Robertum Cullen, Armigeros, Advocatos, atque alios viros quales postea assumentur seu eligentur Socii, IN UNUM CORPUS POLITICUM ET CORPORATUM, vel LEGALEM INCORPORATIONEM, per Nomen et Titulum REGALIS SOCIETATIS EDINBURGI, ad promovendas Literas et Scientiam utilem, utque talis existens, et per tale nomen Perpetuitatem habeat et Successionem; atque ut potens et capax sit capere, tenere et frui proprietate reali seu personali, et petere, Causas agere, defendere et respondere, et conveniri in Jus, trahi, defendi et responderi in omnibus seu ullis nostris Curiis Judicaturæ: ET NOS potestatem damus Petitoribus primum eorum Congressum tenendi, quarto die Lunæ mensis Junii proximi, in Bibliotheca Academiae Edinensis, hora duodecima meridiana, cum potestate comperendinandi, atque, vel ad dictum Congressum, vel ad tempus in quod idem, per majorem Suffragiorum numerum eorum qui aderunt, comperendinatus fuerit, eligendi Præsidem et tot Socios quot idoneos ad complendam Societatem judicaverint; ibique, necnon ad eorum Congressus subsequentes, ordinandi Canones, ad quos Res Societatis sint administrandæ, Præsidesque et Socii sint eligendi; qui, tamen, Canones mutari vel augeri possint, majore suffragante numero Sociorum qui ad ullum Congressum Societatis aderunt, si modo quæ sunt mutanda vel adjicienda, proposita fuerint in

Congressu habito uno mense ante illum Congressum ubi de his judicandum sit: ET NOS ordinamus, ut cunctæ Res antiquæ, Tabulæ publicæ, Librique Manuscripti, quos acquisiverit dicta Societas, deponantur in Bibliotheca Facultatis Juridicæ, atque ut universa Corpora quæ ad Historiam Naturalem pertinent, quæque eadem Societas acquisiverit, deponantur in Musæo Academiæ Edinensis, ita ut utraque Collectio aperta sit Sociis, et e re publica sit, quantum fieri potest: ET dicti Petitores, atque ii ex quibuscunque postea constabit dicta Societas, per has Literas patentes, potestatem habebunt privatas ferendi Leges ad ejus administrationem idoneas, et in aliis rebus procedendi, agendi et faciendi, congruè cum Generali Lege et Praxi nostri Regni Scotiæ in talibus casibus. IN CUJUS REI TESTIMONIUM, præsentibus Sigillum nostrum per Unionis Tractatum custodiena. et in Scotia, Vice et Loco magni Sigilli ejusdem, utend. ordinat. appendi mandavimus: APUD Aulam nostram apud St James's, vigesimo nono die mensis Martii, anno Domini millesimo septingentesimo et octogesimo tertio, Regniue nostri anno vigesimo tertio.

Per Signaturam Manu S. D. N. Regis suprascript.

The first general meeting of the Royal Society of Edinburgh was held, in terms of the above Charter, on Monday the 23d day of June 1783, and the Right Honourable THOMAS MILLER of Barskimming, Lord Justice-Clerk, was chosen President of the meeting.

It was then unanimously resolved, That all the members of the Philosophical Society of Edinburgh should be assumed as members of the Royal Society: And it was likewise resolved, That the Lords of Council and Session, the Barons of Exchequer for Scotland, and a select number of other gentlemen, should be invited to a participation of the Society's labours.

The meeting afterwards proceeded to establish the form or constitution of the Society, and to frame a set of regulations for its future proceedings.

Mr JOHN ROBISON, Professor of Natural Philosophy in the University of Edinburgh, was unanimously elected General Secretary, and Mr ALEXANDER KEITH, writer to the Signet, Treasurer of the Society.

(1811).

IN the original charter of the Royal Society, it was provided that the collections of the Society should be deposited, if belonging to Natural History, in the Museum of the University, and if to Antiquities, in the Library of the Faculty of Advocates. Much inconvenience, however, could hardly fail to result from this arrangement, especially when the researches of the Society, having, as of late, been much turned to Geology, it became an object to collect together the specimens which served to illustrate the subjects under discussion, and to have them at hand when reference should be necessary.

In a Museum arranged with a view to public lectures, (like that of the University), such an order as was required for this purpose could not easily be preserved; the Professor of Natural History must feel himself interrupted by the examinations which the Members of the Royal Society might wish to make; and it would often be a point of delicacy, not to give him the trouble that such examinations would require.

These considerations induced the Society to apply for a new charter, under which its collections should remain in its own possession, so as to be at all times accessible to its Members.

As the interest of the two bodies just mentioned, might be somewhat affected by these alterations, the first step taken was to give them information of the intentions of the Society, and to request their concurrence in a measure of such manifest justice and utility. The Faculty of Advocates readily assented to this proposal; and the University, though at first in doubt whether it were not bound in duty to resist the alteration, on more mature deliberation, resolved to withdraw all opposition.

As it was not meant that the new charter should have any retrospect, the Huttonian Collection, with a great number of other articles, the property of the Society, still remain in the University Museum. The foundation of a new collection, in the Society's apartments, has been laid, by a cabinet presented by Mr ALLAN, containing specimens of the rocks round Edinburgh; a collection by Colonel IMRIE, illustrating the section of the Grampians which he has given in the 5th volume of the *Transactions* of the Society; and a collection of specimens from Sir GEORGE MACKENZIE, illustrating the Mineralogy of Iceland.

The New Charter, which follows, hardly differs in anything from that contained in the first volume of the *Transactions* of the Society, except in what respects the two restrictions that have just been mentioned.

GEORGIUS TERTIUS, Dei gratia, Britanniarum Rex, Fidei Defensor; omnibus probis hominibus ad quos præsentes literæ nostræ pervenerint, salutem: Quandoquidem Nos considerantes, quod petitio humilis nobis oblata fuerit a Regali Societate Edinburgi, et præfideli nostro et prædilecto consanguineo Henrico Duce de Buccleuch, ejusdem præside, in nomine et vice Societatis, et omnium ejusdem Sociorum; in qua petitione enarratur, quod per regiam nostram cartam, datam vigesimo nono die mensis Martii anno Domini millesimo septingentesimo et octogesimo tertio, Nobis benignè placuisset constituere, erigere et incorporare quosdam ibi nominatos in corpus politicum et corporatum, nomine tituloque REGALIS SOCIETATIS EDINBURGI, ad promovendas literas et scientiam utilem, cum facultatibus et privilegiis ibidem concessis, et speciatim, ut potens et capax sit tenendi proprietatem realem et personalem, causasque agendi et defendendi, Præsidem et Socios eligendi, canones ordinandi, et perpetuam successionem sub tali nomine habendi: quod, virtute prædictæ cartæ, Regalis Societas Edinburgi, ita creata, substituerit, suisque officiis a prima institutione, ritè functa sit: quod cartâ prædictâ ordinatum fuerit, cunctas res antiquas, tabulas publicas, librosque manuscriptos, quos acquisiverit Societas, in Bibliotheca Facultatis Juridicæ deponi; atque universas res ad historiam naturalem pertinentes, quasque Societas acquisiverit, in Musæo Academiæ Edinensis deponi: quod, ab hac constitutione incommodum haud parvum ortum fuerit; cùm Regalis Societas, nullum jus in Bibliothecarios Facultatis Juridicæ, nec in Custodes Musæi Academiæ Edinensis, habeat, nec horas eorum ministerii regulasve admissionis ad ea repositoria præscribere possit, nec Societati licitum sit congressus suos in eorum alterutro tenere; quæ cùm ita sint, hactenus Societati non licuit suas collectiones ita disponere, ut Sociorum aliorumve studio et disquisitioni aptè subjiciantur, undè et alia dona expectanda essent: Quod prædicta Societas, causâ hæc incommoda amovendi, nostraque bona proposita in hac institutione ad effectum perducendi, sapientiæ nostræ regiæ humiliter subjiciat, ut detur Societati jus collectiones suas cujuscunque generis uno in loco deponendi, quo sibi ordine placuerit, sub custodibus a Societate eligendis ejusque potestati subjectis; itaque ut cartam, cum privilegiis idoneis humilibus nostris petitoribus concedere dignemur; ut et in hac petitione oratum sit, ut Nobis benignè placeret de novo Cartam Nostram Regiam concedere dictæ Regali Societati Edinburgi, ejusque Sociis, qua iterum darentur jura, facultates, et privilegia,

in carta regia per quam corpus istud creatum fuerat concessa, et qua insuper provideretur, uti nobis in regia nostra sapientia idoneum videatur, ut Societati potestas daretur collectiones suas antea memoratas in uno ædificio deponendi, eis legibus, et eis ministris, qui Societati placerent, hosque sibi subiectos haberet: Et nos certiores facti hanc petitionem justam esse rationique consentaneam, et certis conditionibus et modis, in præsentibus expressis, concedi debere: IGITUR, constituimus, erigimus et incorporavimus, sicuti Nos regiâ nostrâ prærogativâ, et gratiâ speciali, pro Nobis nostrisque regiis successoribus, per has præsentibus, constituimus, erigimus, et incorporamus, prædictum Henricum Ducem de Buccleuch, Sociosque dictæ Regalis Societatis, atque alios qui postea eligentur Socii, in unum corpus politicum et corporatum, vel legalem incorporationem, nomine et titulo REGALIS SOCIETATIS EDINBURGI, ad promovendas literas et scientiam utilem, utque talis existens, et tali nomine, perpetuitatem habeat et successionem; DECLARANTES, Quod dicta Societas capax sit capere, tenere, et frui proprietate reali seu personali, et petere, causas agere, defendere et respondere, et conveniri, in jus trahi, defendi et responderi, in omnibus seu ullis nostris Curiis Judicaturæ; et declarantes quod dictæ Societati fas sit, sigillo, tanquam Societatis sigillo, uti; dantes potestatem dictæ Societati, per majorem suffragiorum numerum eorum qui aderunt, eligendi Præsidem aliosque officarios pro negotiorum administratione; necnon ordinandi canones, ad quos Socii sint eligendi et res Societatis sint administrandæ, conditionibus hujus cartæ sive donationis haud incongruentes, nec legibus et praxi nostri regni Scotiæ contrarios; et declarantes, quod hujusmodi canones sanciri nequeant, nisi ritè propositi fuerint in congressu habito saltem uno mense ante illum congressum quo sancienti sint: dantes etiam potestatem Societati ordinandi et administrandi collectiones rerum antiquarum, tabularum publicarum, librorum manuscriptorum, et rerum ad historiam naturalem pertinentium, quas Societas postea acquisiverit, easque in Musæo et Bibliotheca, tali ordine et modo ut Societati placuerit, deponendi: SALVIS tamen conditionibus, in hac nostra carta provis; declarantes insuper hanc cartam nostram concessam esse sub his conditionibus sequentibus, videlicet, Quod jura, facultates, et privilegia, per præsentibus in dictam Societatem collata, nullo modo detrahent de ullo jure dominii quod competit Academiae Edinensi in collectiones antehac depositas in Musæo Academiae, virtute cartæ nostræ Societati Regali datæ, prædicto vigesimo nono die mensis Martii millesimo septingentesimo et octogesimo tertio; antedicta Societate quantum in se est astricta, omne jus, ad collectiones antehac factas et in Musæo prædicto depositas, in dictam Academiam transferre; et quod Historiæ Naturalis Professori copia introitus in Musæum et Bibliothecam Societatis Regalis detur æquè ac Sociis ipsius Societatis; et quod dictæ Societati non sit

licitum constituere Professore, prælectorem seu Doctorem Mineralogiæ, Geologiæ, aut Historiæ Naturalis, nec suis collectionibus uti ad talem institutionem promovendam, nisi quæ vel nunc sit, vel posthac fuerit, in Academia Edinensi.—IN CUJUS REI TESTIMONIUM, sigillum nostrum per Unionis Tractatum custodiend., et in Scotia vice et loco Magni Sigilli ejusdem utend., ordinat., præsentibus appendi mandavimus; Apud Aulam nostram apud St James's, vigesimo septimo die mensis Decembris anno Domini millesimo octingentesimo et octavo, regnique nostri anno quadragesimo nono.

Per signaturam manûs D. N. Regis supra script.

Written to the Seal, and registered the
thirtieth day of August 1811.

JAMES DUNDAS, *Dep't.*

Sealed at Edinburgh, the
thirtieth of August,
One thousand eight
hundred and eleven
years.

JAMES ROBERTSON,
Sub'. £80 Scots.

This charter, as well as the former, having left the Society in possession of the power of making By-laws for the regulation of its affairs, it was proposed to revise the whole of those laws, and to make such alterations as, after the experience of thirty years, might appear to be necessary.

The Society, therefore, having at several General Meetings taken this subject into consideration, after mature deliberation, and with due attention to the clause in the charter that respects the enactment of such laws, did, at a General Meeting, on the 23d of December 1811, sanction the Laws that follow, and declare them to be the rules by which the Society is to be governed, till all, or any of them are regularly repealed.

L A W S
OF THE
ROYAL SOCIETY OF EDINBURGH,
ENACTED 23d MAY 1811.

I.

THE ROYAL SOCIETY OF EDINBURGH shall be composed of Ordinary and Honorary Members.

II.

Every Ordinary Member, within three months after his election, shall pay as fees of admission Three Guineas, and shall further be bound to pay annually the sum of Two Guineas, into the hands of the Treasurer.

III.

Members shall be at liberty to compound for their annual subscription, each paying according to the value of an annuity on his life, determined as in the ordinary insurance on lives.

The power of raising the annual subscription shall remain with the Society.

IV.

Ordinary Members, not residing in Edinburgh, and not compounding for annual subscription, shall appoint some person residing in Edinburgh, by whom the payment of the said subscription is to be made, and shall signify the same to the Treasurer.

V.

Members failing to pay their subscriptions for three successive years, due application having been made to them by the Treasurer, shall cease to be Members of the Society, and the legal means for recovering such arrears shall be employed.

VI.

None but Ordinary Members are to bear any office in the Society, or to vote in the choice of Members or Office-bearers, nor to interfere in the patrimonial interest of the Society.

VII.

The number of Ordinary Members shall be unlimited.

VIII.

The Ordinary Members shall receive the volumes or parts of the Society's Transactions, when published, at the booksellers' price, or the price at which they are sold to the trade. This regulation to continue in force for five years from the date of its enactment; and it is left to the Society then to consider, whether the volumes cannot be afforded *gratis* to the Members.

IX.

The Society having formerly admitted as Non-resident Members, gentlemen residing at such a distance from Edinburgh as to be unable regularly to attend the Meetings of the Society, with power to such Non-resident Members, when occasionally in Edinburgh, to be present at the Society Meetings, and to take a part in all their inquiries and proceedings, without being subjected to any contribution for defraying the expenses of the Society; it is hereby provided, that the privileges of such Non-resident Members already elected shall remain as before; but no Ordinary Members shall be chosen in future under the title and with the privileges of Non-resident Members. The Members at present called Non-resident shall have an option of becoming Ordinary Members; if they decline this, they shall continue Non-resident as formerly.

X.

The Honorary Members of the Society shall not be subject to the annual contributions. They shall be limited to Twenty-one, and shall consist of men distinguished for literature and science, not residing in Scotland.

XI.

The election of Members, whether Ordinary or Honorary, shall be by ballot; it shall require the presence of Twenty-four Members at least to make a quorum, and the election shall be determined by the majority of votes.

XII.

The election of Members shall be made at one General Meeting annually, on the fourth Monday of January.

XIII.

No person shall be proposed as an Ordinary Member, without a recommendation presented by a Member of the Society, and subscribed by Three, to the purport mentioned below; * which recommendation shall be hung up in the Rooms of the Society, at least during Three Ordinary Meetings (of the Classes) previous to the day of election.

XIV.

In order to carry on with facility and success those improvements in science and literature, which are the objects of the institution, the Society shall be divided into two Classes, the Physical and the Literary Class; the former having for its department the

* "A.B., a gentleman well skilled in many branches of Philosophy and Polite Learning (Mathematics, Chemistry, Natural History, &c.), being to our knowledge desirous of becoming a Member of the Royal Society of Edinburgh, we whose names are subscribed, do recommend him as deserving of that honour, and as likely to prove an useful and valuable Member."

sciences of Mathematics, Natural Philosophy, Chemistry, Medicine, Natural History, and what relates to the improvement of Arts and Manufactures; the latter having for its department the inquiries relative to Speculative Philosophy, Antiquities, Literature, and Philology.

XV.

The Classes shall meet alternately on the first and third Mondays of every month, from November to June inclusive. It shall be competent, however, to bring matters of a Physical or Literary kind, before either Class of the Society indiscriminately. To facilitate this, one Minute-book shall be kept for both Classes; the Secretaries of the respective Classes either doing the duty alternately, or according to such agreement as they may find it convenient to make.

XVI.

The Society shall from time to time make a publication of its Transactions and Proceedings. For this purpose, the Council shall select and arrange the papers which they shall deem worthy of publication in the *Transactions* of the Society, and shall superintend the printing of the same.

The Transactions shall be published in Parts or *Fasciculi*, and the expense shall be defrayed by the Society.

XVII.

There shall be elected annually, for conducting the publications and regulating the private business of the Society, a Council, consisting of a President; Two Vice-Presidents; a President for each Class of the Society; Six Counsellors for each Class; one Secretary for each; a Treasurer; a General Secretary; and a Keeper of the Museum and Library.

XVIII.

The election of the Office-bearers shall be on the fourth Monday of November.

XIX.

Four Counsellors, Two from each Class, shall go out annually. They are to be taken according to the order in which they presently stand on the list of the Council.

XX.

The Treasurer shall receive and disburse the money belonging to the Society, granting the necessary receipts, and collecting the money when due.

He shall keep regular accounts of all the cash received and expended, which shall be made up and balanced annually; and at the General Meeting in January, he shall present the accounts for the preceding year to be audited. At this Meeting the Treasurer shall also lay before the Society a list of all arrears due above twelve months, and the Society shall thereupon give such directions as they may find necessary for recovery thereof.

XXI.

At the General Meeting in November, a Committee of Three Members shall be chosen to audit the Treasurer's accounts, and give the necessary discharge of his intromissions.

The report of the examination and discharge shall be laid before the Society at the General Meeting in January, and inserted in the records.

XXII.

The General Secretary shall take down minutes of the proceedings of the General Meetings of the Society and of the Council, and shall enter them in two separate books. He shall keep a list of the Donations made to the Society, and take care that an account of such Donations be published in the Transactions of the Society. He shall, as directed by the Council, and with the assistance of the other Secretaries, superintend the publications of the Society.

XXIII.

A Register shall be kept by the Secretary, in which copies shall be inserted of all the Papers read in the Society, or abstracts of those Papers, as the Authors shall prefer; no abstract or paper, however, to be published without the consent of the Author. It shall be understood, nevertheless, that a person choosing to read a paper, but not wishing to put it into the hands of the Secretary, shall be at liberty to withdraw it, if he has beforehand signified his intention of doing so.

For the above purpose, the Secretary shall be empowered to employ a Clerk, to be paid by the Society.

XXIV.

Another register shall be kept, in which the names of the Members shall be enrolled at their admission, with the date.

XXV.

A Seal shall be prepared and used, as the Seal of the Society.

XXVI.

The Librarian shall have the custody and charge of all the Books, Manuscripts, objects of Natural History, Scientific Productions, and other articles of a similar description belonging to the Society; he shall take an account of these when received, and keep a regular catalogue of the whole, which shall lie in the Hall, for the inspection of the Members.

XXVII.

All articles of the above description shall be open to the inspection of the Members, at the Hall of the Society, at such times, and under such regulations, as the Council from time to time shall appoint.

(1862).

The following extract from the OPENING ADDRESS delivered by Principal Forbes, one of the Vice-Presidents, on 1st December 1862, will be read with interest, as it not only traces the History of the Society to that date, but gives an account of the Origin, the Objects, and the Constitution of similar Societies. (The address will be found printed in full in No. 59 of the Society's Proceedings.)

GENTLEMEN,—I propose to address you on this occasion with reference to the following points:—First, to recapitulate briefly the Origin, the Objects, and the Constitution of Societies similar to our own; and, secondly, to trace the rise and general history of the Royal Society of Edinburgh.

I. To recapitulate briefly the Origin, Objects, and Constitution of Societies similar to our own.

Societies having any true analogy to the academies of modern Europe, or to the Royal Societies of London and Edinburgh, or the Royal Irish Academy, have arisen within about 300 years. Italy was their birth-place, and perhaps, on the whole, in no country have they flourished more. They appear to have been the direct offspring of the spirit of inquiry so active in that country throughout the sixteenth and seventeenth centuries. According to the literary historians of Italy, the cultivation of literature by academicians, salaried by the Government, commenced at Rome in 1514, under the Pontificate of Leo X. It is well known, that the cultivation of literature and the fine arts continued to be fostered in Italy by similar institutions during many generations. The *Accademia della Crusca* (named after the Italian word for bran or chaff, from the fanciful analogy of sifting the pure from the heterogeneous parts of the language), and the Society of Arcadians, which still exists or existed lately, are familiar examples. But the number of such associations was vastly greater than we can find a parallel for in other countries or in more recent times.

After all, the typical form of the modern Royal Society or Academy is traceable to the astonishing impulse given to the experimental physical sciences in Italy in the sixteenth century. The first such society recorded by Tiraboschi and Libri, the chief annalists of the revival of letters in Italy, was called "*Accademia Secretorum Naturæ*," founded at Naples in 1560, of which the celebrated Baptista Porta was president. It was suppressed, however, by the influence of the priests. The society of *Lincei*, or Lynx-eyed scrutators into natural phenomena, of which Galileo was a member, held its sittings at Rome. It was founded in 1604 by Cesi, a noble Roman, and still survives, though after a long intervening period of inactivity.*

It is easy to see how the newly born interest of mankind in the investigation of nature

* See Drinkwater Bethune's *Life of Galileo*, p. 37.

by experiment, must, far more than mere literary discussion or dialectical argument, have fostered such associations. In those glorious days when a virgin mine of natural phenomena was first opened to the intelligent exploration of mankind, the succession of inventions, discoveries, and capital theories in physical science, kept every thoughtful mind on the stretch. The comparatively recent art of printing served to disseminate rapidly both facts and doctrines; the promulgation of the true system of the world by Copernicus, the improved astronomical observations of Tycho, the mechanics of Da Vinci and Stevinus, the telescope of Galileo, kept all Europe in a tremble of expectation for the discoveries of each succeeding year. What *could* men do in such circumstances but assemble with others like-minded, and see with their own eyes the facts which seemed to contradict the experience or prepossessions of ages, and either maintain or overthrow the new philosophy? It was under such circumstances that the Florentine Academy, "del Cimento" was founded in 1657,* under the patronage of the Grand Duke Ferdinand II. of Tuscany, and with the personal support of his brother Leopold. The withdrawal of the latter from Florence in 1667, on being made a Cardinal, was followed by the decline and virtual extinction of this remarkable Society. This is considered by Mr Hallam as a proof of the inconveniences attending such exalted patronage of literary societies; yet it does not seem to afford a sufficient reason for the cessation of the labours of a society which gave such indisputable proofs of vigour, whose Transactions remain a book of reference to this day, and whose members, including the best and ablest pupils of Galileo, were well able to sustain their position amongst the learned men of Europe.

The wide reputation of the Florentine Essays contributed, no doubt, to the establishment—also under Royal sanction—of the Royal Society of London. This took place in November 1660, immediately after the Restoration, and from that time their proceedings may be traced with minute precision. Founded originally upon the basis of a private Society for the cultivation of Natural and Experimental Science instituted in 1645, it was incorporated by charter in 1662, four years before the Academy of Sciences of Paris was instituted in 1666 under the auspices of Colbert. This last was incorporated with the previously existing *Academie Française* founded for the cultivation of the French Language and Literature, much after the manner of the Crusca Academy in Italy.

The Academy of Sciences and the Royal Society of London subsist, it is needless to say, to this day; and each in their own sphere, and in varying ways, according to the exigencies of the time, have contributed in the most important way to the improvement of the Physical and Mathematical Sciences. The unbroken series of Transactions of both are without a parallel in the history of knowledge for continuity and importance. The publication of the "Philosophical Transactions" commenced in monthly numbers on the 1st March 1665. Our own Society has very recently acquired for the first time a complete set of these publications from the commencement,—an acquisition of some difficulty and importance.

An hundred and twenty years elapsed before the progress of knowledge and of organisation in the sister kingdoms of Scotland and Ireland sufficed for the formal institution of associations on similar principles and with similar ends to the Royal Society. The Royal Society of Edinburgh was formally constituted in 1783, and that of Dublin, or the Royal Irish Academy, in 1785. Both arose out of societies previously existing, though of a

* First meeting, 18th June 1657. *Saggi*, &c., Edit. 1841; Introd. p. 95. As its name imports it was an association for making experiments.

more private character, and not incorporated. As most interesting to us, I shall presently proceed to trace the rise of the Royal Society of Edinburgh.

But before giving an account of this, let me interpose a remark on the organisation of such societies generally. Even in early times, they differed from one another in respect of being either under the direct influence of the State, or of being merely private associations. This distinction continues to the present day. The French Academies, for example, are national institutions, and the members receive salaries from public funds. The Royal Societies of this country, on the other hand, are free from even the vestige of State control, and pursue their aims without pecuniary objects, and according to their own regulations. This is not the place to discuss the advantage of the two systems, in favour of each of which something may be said. The place of a salaried academician is often really desirable for those whose fortunes do not enable them to pursue the unremunerative paths of science and literature. On the other hand, the pecuniary gain is liable to give rise to motives less pure than mere honorary distinctions can do, on the part both of candidates for the post and of the academical electors. It appears from the history of the *Académie Française* in its origin, that the enlargement and incorporation of it under the State influence of Cardinal Richelieu was much resented by its original members.

The two forms of constitutions—the one creating a power in the State with corresponding advantages to its associates, the other receiving an impulse entirely from within—are really so distinct, that it seems almost invidious to compare them. The latter appears, from the history of our country, to be most congenial to English habits in such matters; and perhaps we have no great reason to regret the absence of an “Institute” under Imperial or Royal administration.

But another question arises with reference to such Societies as those of London, Edinburgh, and Dublin: Whether, in default of substantial endowments in connection with membership, an artificial standard of literary and scientific distinction is to be held up as regulating the entrance or refusal of candidates?—whether, in short, the members of our Societies are to be held as unsalaried academicians,—men selected for intellectual attainment alone, and forming therefore a learned class?

On this point, which is one of considerable importance, I confess that I entertain little doubt. Whatever disadvantages may attend the admission to Societies like this of persons who have no pretensions to what, for convenience, one may call a *professional* acquaintance with science, art, or literature, I think that they ought to be eligible. It is little likely that where no emoluments or distinctions present themselves, the privilege of membership will be sought except by those who feel *some* sympathy with pursuits for which they have probably a secret leaning, but from which they have been withheld by force of circumstances. I say, let them come, and freely, and let us regard their adhesion to our ranks as a compliment on either side.

In Britain, all experience points to this resolution of what may be in some respects regarded as a difficulty. From the day of the foundation of the Royal Societies, both of London and Edinburgh, the rule of mixture of classes, and the absence of an academic standard of exclusion, has been all but universal. The co-operation of men of all ranks, and of the most varied occupations and acquirements, was the very corner-stone of these institutions. While they diffused a taste for science amongst the nobility, gentry, and professional men, this very mixture enhanced, in no small degree, the interest of the proceedings of the Societies themselves, and conduced to the respect shown to literature and

science. It also indirectly aided the progress of the latter, by raising a large fund for the publication of Transactions and the conduct of experiments.

To attempt to enforce a contrary principle, would be to reduce the members of our Societies to a select few, without the advantages which academicians properly enjoy, and without the cordial sympathy which the lay-members (as they may be termed) contribute to diffuse amongst an intelligent public, whose sentiments in such matters is never to be despised.

II.—*Rise and Progress of the Royal Society of Edinburgh.*

Guided by an interesting passage in the "Life of Lord Kames,"* it would appear that the germ of our Society is to be found in the *Rankenian Club*, instituted in Edinburgh in 1716, for literary social meetings, and which had the unusual duration (for such associations) of almost sixty years. It expired in 1774. It included among its original or early members, Principal Wishart, Bishop Horsley, Colin Maclaurin, John Stevenson, Professor of Logic, Lord Auchinleck, several of the ministers of Edinburgh and neighbouring gentry, and, finally, Sir John Pringle, afterwards President of the Royal Society of London. No publications are known to have proceeded from this Club.†

Contemporary, in part, with the Rankenian Club was a Society for the Improvement of Medical Knowledge, instituted in 1731. This Society, of which little perhaps is now remembered save its published Transactions, appears to have been conducted with an enlightened sense of the dignity and importance of associations for the promotion of science, which its founders justly considered to be more advanced by publishing able papers, than by making a parade of ceremonious meetings and printing lists of dignified office-bearers. With a reticence which we all must regret, the six volumes of *Medical Essays* give no clue to the constitution of the Society, the nature or frequency of its meetings, the names of the presidents, nor even of the diligent secretary by whom, no doubt, its Proceedings were edited.‡

I think I am entitled to assume that the papers were fully equal in point of merit to those contributed on medical subjects to the Royal Society of London, or any similar institution. They went through more editions than one, were translated into foreign languages, and were highly commended by the celebrated Haller. It is reasonable to believe that the wide reputation of the Edinburgh Medical School dates from the publication of these important Essays.

In a paper on the Climate of Edinburgh, which I contributed a few years ago to the

* [By Lord Woodhouslee] two vols. 4to. Edin. 1807, vol. i. p. 174, and list of members, Appendix p. 50.

† Since the reading of this address I have been indebted to Professor Fraser of the Edinburgh University for a reference to an interesting allusion to the "Rankenian Club," contained in Dugald Stewart's First Dissertation on the Progress of Metaphysical and Ethical Philosophy, part ii. sect. 4, where he speaks of Berkeley's celebrated system of Idealism having "attracted very powerfully the attention of a set of young men who were then prosecuting their studies at Edinburgh, and who formed themselves into a society for the express purpose of soliciting from the author an explanation of some parts of his theory which seemed to them obscurely or equivocally expressed. To this correspondence the amiable and excellent prelate appears to have given every encouragement; and I have been told," adds Mr Stewart, "by the best authority, that he was accustomed to say that his reasonings had been nowhere better understood than by this club of young Scotsmen." To which Mr Stewart adds this note: "The authority I here allude to is that of my old friend and preceptor, Dr John Stevenson, who was himself a member of the *Rankenian Club*. " Mr Fraser justly remarks, that the dates tally well with this statement; Berkeley's "Dialogues" having been published in 1713, and the Rankenian Club having (as stated above) been founded in 1716.

‡ An incidental notice, however, in the Introduction to the first volume of the Royal Society's Transactions informs us that the secretary was the first Professor Monro, who was also a large contributor to the *Essays*.

Royal Society's Transactions,* I have brought into view the early meteorological observations contained in the *Medical Essays*, though by whom they were made does not appear.

The six volumes of *Medical Essays* terminated in 1744. In 1737, at the suggestion of the celebrated Maclaurin, the objects of the Society had already been extended so as to include general science and literature.† It had not existed for many years in this form before political troubles antecedent to and during the insurrection of 1745-6 seriously impaired its usefulness, and probably prevented the separate publication of its Transactions, which was from the first contemplated.‡ The death of Maclaurin, in June 1746, which was immediately traceable to his exertions on the side of the English in the melancholy struggles of the period, was a heavy blow to its usefulness, and a mass of papers connected with it were found to have been in his possession, which could be only partially recovered. Some of these were published in 1754, under the title of *Essays and Observations, Physical and Literary, read before a Society in Edinburgh*, and they were followed by two other volumes in 1756 and 1771. The first president of the Philosophical Society was the Earl of Morton (afterwards president of the Royal Society of London), Maclaurin and Dr Plummer (Professor of Chemistry) were secretaries. Afterwards Professor Monro (*Secundus*), and the celebrated David Hume, acted as secretaries. The Society then held its meetings in the Advocates' Library. Medical subjects still greatly predominated in the Transactions; but among the contributors appear the names of Maclaurin, Lord Kames,§ John Stewart (Professor of Natural Philosophy), Matthew Stewart, Porterfield, Melvill, and Joseph Black.||

It is no small credit to this unpretending Society that it not only gave from its members two Presidents to the Royal Society of London, but reckoned amongst its contributors perhaps the two most eminent disciples of the Newtonian school which Britain produced in the whole of the eighteenth century,—namely, Colin Maclaurin and Matthew Stewart. The Philosophical Society of Edinburgh was the immediate parent of the Royal Society.¶

The Royal Society of Edinburgh took its rise in a meeting of the Professors of the University of Edinburgh, many of whom were also members of the Philosophical Society,** on the proposition of Principal Robertson, towards the end of 1782. It is stated to have been founded "on the model of some Foreign Academies," and so far differed from the Royal Society of London, that literary objects were equally promoted with science, and the

* Vol. xxii. p. 327.

† The date usually assigned is 1739. But from two letters of Maclaurin printed in the "Scots' Magazine" for June 1804, the earlier date is certainly correct. Mr David Laing has shown me a pamphlet (of sixteen quarto pages) containing the Regulations of the Society and a List of Members. The List of Members is dated 1739; but at page 3, the first Thursday of December 1737 is fixed as the first day of meeting. (See page 22 hereof for the proposed Laws and List of Members of this Society.)

‡ The papers read at the Society were in part printed in the later volumes of the *Medical Essays*, in the *Philosophical Transactions*, and in *Maclaurin's Fluxions*. It appears from a notice in Mr R. Chamber's *Domestic Annals* (vol. iii. p. 477), that, in 1743, the Society advertised for specimens of stones, ores, saline substances, bitumens, &c., to be sent to their secretary, Dr Plummer, and it is stated that "the Society undertake, by some of their number, to make the proper trials at their own charge for discovering the nature and uses of the minerals, and to return an answer to the person by whom they were sent, if they are judged to be of any use, or can be wrought to advantage." The quotation is from the *Edin. Evening Courant*, 22d Aug. 1743.

§ Henry Home, Lord Kames, became president about 1769, and contributed greatly to the success of the Society.

|| Dr Black's sole contribution was his celebrated "Experiments on Magnesia Alba," *Essays*, &c. vol. ii. p. 157.

¶ See Life of Kames, i. 184, and Trans. Roy. Soc. Edin., i. p. 6.

** The last survivors in our body of the Philosophical Society were, Professor James Russell and Sir William Miller, Lord Glenlee. The latter died so lately as 1846, in his ninety-first year. The Minute-Books of the Philosophical Society were expressly conveyed to the custody of the Royal Society (see Minute, R.S., of 4th August 1783); but they are, it may be feared, now irrecoverably lost.

interests of literature represented by a Literary "Class" or subordinate Academy, having distinct meetings and office-bearers. It appears from a curious letter of Professor Dalzel, in Professor Innes's *Life of Dalzel*,* that the Royal Society was more particularly modelled on the Berlin Academy, and that its rise was partly due to a contest between Lord Buchan and the Society of Antiquaries on the one hand, and the University and Faculty of Advocates on the other. The result, however, of this party-war was in favour of the interests of science and literature; for the Society received a Royal Charter, and was formally constituted at a meeting held in the College Library on the 23d June 1783, under the presidency of Principal Robertson, at which were also present the Lord Provost, Lord Justice-Clerk Miller, Professors Cullen, Monro (*Secundus*), Hugh Blair, John Walker, Adam Ferguson, John Robison (who was then appointed secretary), the Solicitor-General Ilay Campbell, and several members of the Faculty of Advocates, the celebrated Adam Smith, and Mr Hunter Blair, M.P. for the city of Edinburgh.

The Society started at once into vigorous existence, and, looking especially to the reputation of the members of the Literary Class, few societies in any country have given a fairer prospect of a distinguished career. The members were either Resident, Non-Resident, or Honorary. The number of Original Residents was 102, and of Non-Residents, 71; and this before the Society had ever held a meeting. A short time later, the total number of members belonging to the Physical Class was 101, and to the Literary Class, 114. An excerpt from the MS. list of original members, in Professor Robison's handwriting (exclusive of those who have been named as founders of the Society), will give no mean idea of the eminent position of Edinburgh in the literary world of that day:—

The PHYSICAL CLASS included Joseph Black, Clerk of Eldin, Sir John Dalrymple (Lord Hailes), James Gregory, James Hutton, John Playfair, Dugald Stewart, Lords Bute and Dundonald, Sir James Hall, James Watt, Dr Small of Dundee, Patrick Wilson; and in the LITERARY CLASS we find the Lord President, Chief Baron, and Lord Advocate, John Home, David Hume, Henry Mackenzie, Alexander Tytler (Lord Woodhouselee), the Duke of Buccleuch, Archibald Alison, Dr Beattie, Edmund Burke, Lord Morton, Lord Hopetoun, John Hunter of St Andrews, Thomas Reid, Young of Glasgow, Dalzel, and Mr (afterwards Sir Robert) Liston. The earliest meetings of the Royal Society (as well as that of its incorporation) took place in the University Library. A large subscription towards the erection of the New College was made by the Society, on the understanding that the Society should be accommodated within its walls; and space was actually allotted on the north side of the building. How this was frustrated I do not know. The formal meetings continued to take place usually in the same place (the Library), at least until 1808, with an occasional substitution of the Physicians' Hall. In 1810, the Society purchased a house, No. 40 George Street, where they were accommodated until 1826; when they removed to the rooms which they still occupy, under a lease from Government, in the Royal Institution Building in Princes Street.

I proceed to trace rapidly the fortunes of the Society, which almost on the very day that I address you has completed the eightieth year of its existence.

The first President was the Duke of Buccleuch. He was succeeded in 1812 by Sir James Hall, who, resigning in 1820, was followed by Sir Walter Scott. On the death of the latter in 1832, Sir Thomas Makdougall Brisbane filled his place, to be succeeded at his decease in 1860 by the Duke of Argyll. Thus we have the remarkable and very unusual

* Page 39 (30th Nov. 1782).

fact, that the first four presidencies endured over seventy-seven years. The chief secretaryship has in the same period been held by only five individuals, of whom but two were removed by death.

The earliest period of the Royal Society, and also the earliest volumes of its Transactions, were marked by the efficiency of the literary department. The first two volumes show a substantial if not precise equality in the extent of the published contributions devoted to literature and to science. The balance will even preponderate on the literary side, if we include the elegant biographies of deceased Fellows drawn up by accomplished authors. About 1793—only ten years from the origin of the Society—the activity of the Literary Class had already become materially impaired. But indeed at no period could the literary papers bear comparison in point of merit, as a whole, with those on science. The great men of letters, who lent the weight of their names to the institution, hardly maintained its reputation by their pens. The Robertsons, the Reids, the David Humes, the Fergusons, and the Adam Smiths, hardly contributed to the pages of the Transactions.

It appears from the minutes of the Physical and Literary Classes which are now before me, that towards the end of last century the meetings of the Literary Class became rare—not averaging three in a year—in consequence of the deficiency of communications. In 1807, when, owing to the interest excited by the geological discussions of the period, in which Sir James Hall, Professor Playfair, Lord Webb Seymour, Professor Jameson, Dr Thomas Thomson, Mr Thomas Allan, and Mr Macknight took active parts, the business of the Physical Class literally overflowed into the Literary Class, the evenings appropriated to the latter, and not taken up by literary papers, being devoted to science. In the following year the minute-book of the Literary Class ceases altogether, and the separate meetings appear to have been discontinued from that date (1808). Afterwards a few literary papers were received at the ordinary meetings, without any attempt at separation. It was, however, only in 1827 that the distinction of the two classes was finally abandoned in the annual election of office bearers, and *that*, not from any disinclination on the part of the Society to afford honourable room to literary papers, but simply from the cessation of such communications. It is perfectly understood that a renewal of these would be considered to be a credit to the Society, and I hope that our literary friends will be induced to give us the benefit of their support and their contributions.

With the exception of the Literary Class, the Proceedings of the Society were at no time marked by more energy and importance than during the first twelve or fifteen years of the present century, when the geological discussions to which I have referred made Edinburgh the chief centre of information on such subjects. They gave rise to the masterly papers of Sir James Hall, with which at that time the Transactions were enriched.* These were followed or accompanied by the early communications of Sir David Brewster on Polarization and other parts of Optics, which added much to the scientific reputation of the Society.

The accession of Sir Walter Scott to the presidency in 1820 did not reanimate the Literary section of the Society. He contributed no paper, although he at one time very regularly presided at the ordinary meetings. From 1832, when the printing of the "Proceedings" at every meeting commenced, to the present time, nothing in the history of the

* The last meeting at which Sir James Hall appears to have presided, was that of the 5th June 1820. He resigned the presidency in November following. His last paper printed in the Transactions, "On the Consolidation of the Strata of the Earth," was read in March 1825.

Society calls for special remark. During that period, as at former ones, there have been fluctuations in the prosperity of the Society, both as regards the number and value of the communications received, and the interest taken in the meetings by the Fellows at large and by the general public. That such must occur the founders of the Royal Society were sufficiently aware. At the very opening of our Transactions we find it observed, that "Institutions of this kind have their intervals of languor as well as their periods of brilliancy and activity. Every associated body must receive its vigour from a few zealous and spirited individuals who find a pleasure in that species of business, which, were it left to the care of the members in general, would be often reluctantly submitted to, and always negligently executed. The temporary avocations, and still more the deaths of such men, have the most sensible effects on the societies to which they belonged. The principle of activity which animated them, if not utterly extinguished, remains long dormant, and a kindred genius is required to call it into life."* The truth of these remarks must be apparent to all who have had experience in such matters. They ought to encourage us to keep alive the interest of our meetings, and to maintain the character of our Society at times when either may appear to be in danger of flagging, resting well assured that the development of knowledge, and the intellectual resources of new generations, will ever from time to time give lustre and importance to associations destined not to meet the caprices or fashions of a time, but to promote the great cause of scientific and literary progress.

[The following is a copy of the pamphlet referred to in Principal Forbes' Address, and in the second footnote on page 19 hereof.]

Proposals for the Regulation of a Society for Improving Arts and Sciences, and particularly Natural Knowledge.

I. **T**HE Society, at the first Institution, shall consist of Forty five Members, one third of whom, at least, shall be Gentlemen who do not make Philosophy or Physick their particular Profession. The Number of Members may afterwards be increased, if two thirds of the Members present at the annual Meeting for Elections agree thereto, but shall always be limited.

II. **EVERY** Person, at his Admission, shall promise that he will endeavour to pursue the Ends proposed by the Institution of this Society, for the Improvement of Arts and Sciences, and to undertake any Enquiry or Experiment recommended to him by the

Society, who shall defray the necessary Charges thereof.

III. **ALL** Elections and Questions shall be determined by Ballot; and every Member shall give his Word of Honour that he shall not bind himself by Promise, or in any manner of way, how he shall ballot on any Occasion.

IV. **THE** Members of this Society, at their first Meeting, shall distinguish themselves into two Classes of Ordinary and Extraordinary Members; the Ordinary being such as do engage, each in his Turn, to give in a Paper or Memorial to be read in a Meeting of the Society. The Extraordinary Members, who are not under so strict an Obligation, shall not exceed in Number.

* Trans. Roy. Soc. Edin., vol. i. p. 6.

V. THAT the Time of the Meetings of the Society may be employed to promote the End of the Institution, and for the better Regulation, Government and Policy of the Society, there shall be chosen at the first Meeting of the Society Thirteen Persons, whereof eight at least shall be of the Ordinary Members, to compose a Council for managing the Affairs of the Society; and out of these thirteen shall be chosen in the same manner a President, two Vice-Presidents, two Secretaries, and a Treasurer, to continue in their respective Offices, till other fit Persons be chosen into the said Offices, on the Day appointed for the annual Election. Of this Council, Six, with the President, or one of the Vice-Presidents, shall be a *Quorum*.

VI. ON the first *Thursday* of *December* 1737, and annually thereafter, the Society shall chuse Eight of the former Council, and five other Members as the Council for the ensuing Year; and immediately after shall proceed to elect a President, two Vice-Presidents, two Secretaries, and a Treasurer.

VII. ON or before the first *Thursday* of *July* 1737, and yearly thereafter, sometime betwixt the annual Election, and first *Thursday* of *July* following, each Member shall pay to the Treasurer one Guinea for purchasing Instruments or Books, making Experiments, and for defraying other Charges of the Society. It is however hereby provided, That the Council shall have Power to exempt from these Payments such Members as they shall judge proper.

VIII. THE Treasurer shall advertise all the Members a Month before the Term of Payment, and likewise before the annual Election; and every Member who shall neglect or refuse to pay the above Contribution at the Time appointed shall forfeit his Place in the Society; but it shall be in his Power to redeem the same, by paying two Guineas to the Treasurer, before, or at the next Meeting for the annual Election: otherwise he shall be incapable of being re-elected a Member during the Pleasure of the Society. But this Law is not to be extended to any

Member who shall happen not to be within *Great Britain* or *Ireland* at the Time.

IX. AFTER the first Election of Council and Officers, the Order and particular Day on which every ordinary Member is to present a Paper to the Society, is to be determined by Lot; the first Diet being at least Six Months after this Meeting, and to go on in a Rotation.

X. EVERY ordinary Member who does not deliver his Paper on the Day appointed, shall, for the first Neglect, incur a Mulct of Half-a-Guinea; if he does not give in his Paper in the next Course, he shall be fined in a Guinea; and, for the third Neglect, shall forfeit his Place.

XI. THE Society shall meet on the first *Thursday* of every Month, except in *September* and *October*, in one of the Chambers in the College belonging to any of the Professors who are Members, at Four o' Clock in the Afternoon, until some other convenient Place shall be appointed.

XII. EVERY Member, who shall be absent from the stated Meetings of the Society, if he is within the Kingdom, shall be fined in a Shilling, for each Meeting. But the Council shall have power to exempt from these Fines certain Members, whose constant Residence and Business lies at a considerable Distance.

XIII. IN all Meetings the President, or, in his absence, the first Vice-President; and if both are absent, the second Vice-President, shall regulate the Conversation, keep good Order, appoint Meetings of the Council, and summon extraordinary Meetings of the Society.

XIV. The Provinces of the two Secretaries may be distributed in such a Manner, that one of them shall have the collecting and reporting what relates to the general Parts of Natural Philosophy; the other, what is more particular. Geometry, Astronomy, Mechanicks, Opticks, and some of the general Parts of Geography may belong to the former. Anatomy, Medicine, Chemistry, Botany, what relates to Metals and other Minerals, and the natural History of the

Country, to the latter. The Secretaries are to write down all the Transactions, Orders and Resolutions of the Society, and afterwards to record them in a Journal-Book; to insert all the Statutes or Laws in a Statute-book; to keep Copies of all Letters and Queries by written Order of the Society; to lay up in a safe Place the Memoirs of Members and Correspondents, taking care that no surreptitious Copies or Excerpts be taken from any of the Books or Papers of the Society. One of the Secretaries, whom the Council shall appoint, shall have the Charge of all Books, Instruments, Models and Curiosities of Nature or Art, gifted to, or purchased by the Society; at the Delivery of which to the Secretary, their Names or Titles, with a Value fixed by the Council, are to be inserted in two Books or Catalogues, under their proper Classes: One of which Books is to be kept by the President, and the other by the Secretary appointed.

XV. THE Treasurer shall collect and deburse the Money of the Society, but is not to lay out any Sum exceeding Ten Shillings at one Time, and on one Account, without an Order of the Council, or at least of the President, or one of the Vice-Presidents, and two of the Council, by a Writing under their Hands. He shall keep an exact Account of what Money he has received or debursed for the Society, and every three Months shall lay before the Council an Account of his Debursements. The Treasurer's annual Account and Vouchers shall be laid before the Society at the first monthly Meeting after the Election; and if another Person has been chosen Treasurer at the preceeding Election, the late Treasurer shall then pay to his Successor in Office the Ballance of Cash in his Hands, if there happens to be any, or give Security for the same, before he is discharged by the Society.

XVI. AT the annual Meeting for Elections, the Society shall appoint a Committee to audite the Treasurer's Accounts for the preceeding Year, and to lay the same with the Vouchers before the next Meeting.

XVII. A Committee shall likewise be

appointed at the annual Election to inspect all the Papers, Memorials and Letters in the Secretaries Hands, and to prepare a List to be laid before the Council of what they think should be preserved, and what others may be thrown aside. The same Committee, with the Secretaries, shall likewise determine when there are a sufficient Number of Papers that seem fit to be published in a Volume, of which they shall give in a List to the Council, who may make such Alterations therein as they shall think proper: Then the List shall be laid before the Society, to be considered by the Members; and, at the next Meeting, the Members shall give in a folded Paper by way of Ballot, in which any Member may write his Objections against any of the Papers contained in the List. These Ballots shall be delivered to the President, who shall read them privately before the next Meeting; and if he finds, in any of them, any thing unfit to be read publickly, he shall suppress and destroy the Paper, but report the Objection itself, and any other Objections made to any of the Papers. After this the Members shall be at Liberty to reason fully on what Papers are fit to be published, and the Matter decided by a Majority of Ballots.

XVIII. AT the annual Meeting for Elections, if there happen to be any Vacancies in the Society, or if two thirds of the Members present agree to increase the Society, any Member may propose one or more Persons to be put upon the List of Candidates; and the Society shall determine by Ballot, what Persons shall be admitted Candidates, by voting every Person proposed separately. Then the List of Candidates being made up, every Member shall put into a Box the Names of so many of the Candidates as there are Places to be filled up; and the Persons who have the Majority of Votes shall be declared Members.

XIX. THE Society shall consider and agree on fit Persons in different Places to be their Correspondents. These shall have Access to the Meetings of the Society, if they happen to be in Town when any

Experiments are to be performed, or Papers read; but not without the Permission of the President, and Consent of the Member or Members whose Papers are to be read that Day; and the Names of such Correspondents shall be mentioned in the Minutes. When any Matter of more private Concern is to be debated or voted in the Society, the Correspondents shall be desired to withdraw.

XX. THE Council shall at some convenient Time revise all the Statutes of the Society, and take into their Considerations what Alterations may be necessary, what Laws ought to be repealed, and what new Laws they think proper to be made for the Advantage of the Society; and the President shall lay the same in Writing before the Society, at least two Meetings before the annual Election, to be perused and considered by the Members, and such Amendments made thereon as seem proper. At the annual Meeting for Elections, the Laws proposed to be altered or repealed, and the new Laws proposed to be made, shall be read and separately voted; and every Amendment, or new Law that is approved of by two thirds of the Members present, shall be inserted in the Statute-book.

XXI. RESOLUTIONS or temporary Regulations taken by the Society are to be recorded by the Secretaries in the Journal-book, but are not to be esteemed concluded on, till they are read and agreed to at another Meeting, when any Member may object against them; and if he is seconded, it shall be determined by a Majority of Ballots, to approve the Resolutions or not.

XXII. AFFAIRS proposed from the Council by the President shall be given in to a Meeting of the Society in Writing, and shall be put into the Secretary's Hands for the perusal of the Members till next Meeting.

XXIII. THE ordinary Meetings of the Society shall begin by one of the Secretary's reading an Abstract of what passed at the former Meeting; then any thing that is new may be offered by any Member; Letters and Queries to Correspondents to be drawn up; Memorials and Answers from Corre-

spondents to be read and considered; Experiments proposed to be made by some of the Members, and reported at the next, or some following Meeting, and the Treasurer appointed to defray the necessary Charges. Then the Paper of the ordinary Member appointed for that Day, and Papers presented by other Members to be read. After which any Member may propose such Difficulties or Objections as occur to him upon what has been read.

XXIV. SUCH Papers as cannot be judged of by reading in a publick Meeting, shall be referred to a Member, and a Day appointed when he shall give an Account and Judgment of the Performance.

XXV. NO Papers given in to the Society shall be communicated to any Person not of the Society, nor lent out to a Member, without Consent of the Author, and an Order of the Council upon the Borrower's Obligation to return it in a certain time, under such a Penalty as the Author or Council shall think fit. Books and Instruments belonging to the Society may be lent out, but to Members only, upon their Obligation to the Secretaries to return them in a certain Time, under a Penalty exceeding the Value.

XXVI. IN the Meetings of the Society, no Conversations are to be allowed on Religious or Political Disputes. But this is not to be understood as if these Reflexions should be unacceptable, which Enquiries into Nature suggest, concerning the Wisdom of its Author, and the Beauty of its Workmanship.

XXVII. IN their Conversations, any Warmth that may be offensive or improper for Philosophical Enquiries is to be avoided. No injurious Insinuations or Expressions of Dislike are to be suffered. Every Member is to have the Intention of the Institution in his View, and to avoid shewing in their Meetings any Remembrance of Differences, if there happen to be any, betwixt him and any other Member.

XXIX. AUTHORITY is to be held of no Weight in their Reasonings. The Shew of Learning, and Quotation of Authors sparingly used in their Papers. Things to be

minded, not Words. Arguments to be chiefly drawn from proper Experiments and clear Consequences deduced from them, or from evident Propositions. Metaphysical Subtilties not to be insisted on.

XXIX. IN making Experiments, and reporting them, great Caution and Accuracy is to be observed. The Members who report Experiments and Observations are to sign them.

Alphabetical List of the Members of the Society for Improving Arts and Sciences, particularly Natural Knowledge, established at Edinburgh, 1739.

MR. William Adams Architect.
 Dr. Charles Alston Professor of Medicine and Botany in the University of Edinburgh.
 Sir John Anstruther Baronet.
 Dr. John Boswell.
 Mr. Dougal Campbell.
 The Honourable Mr. William Carmichael.
 Sir John Clerk of Pennycuik, one of the Barons of Exchequer, Vice-President.
 Dr. John Clerk, Vice-President.
 The Right Honourable Lord Colvill of Culross.
 James Craw of Netherbyers Esq.
 Sir James Dalrymple Bart.
 Mr. John Douglas Surgeon.
 Sir Gilbert Elliot of Minto, one of the Senators of the College of Justice.
 The Rt. Hon. Lord Elphinston.
 The Rt. Hon. Duncan Forbes Esq., Lord President of the Session.
 William Fullarton of Fullarton Esq.
 Mr. James Gray.
 The Rt. Hon. Lord Hope.
 Dr. John Johnston Professor of Medicine in the University of Glasgow.
 The Rt. Hon. the Earl of Lawderdale.
 Mr. Peter Leith.
 Mr. Alexander Lind Advocate, Treasurer.
 Mr. Charles Macky Professor of History in the University of Edinburgh.
 Mr. Colin Maclaurin Professor of Mathematics in the University of Edinburgh, Secretary.
 Dr. George Martin.

Monsr. De Mairan of the Royal Academy of Sciences at Paris.
 Mr. Alexander Monro Professor of Anatomy in the University of Edinburgh.
 The Rt. Hon. the Earl of Morton, President.
 Mr. Hugh Murray-Kynnymound Advocate.
 Mr. John Paisley Surgeon.
 Mr. Francis Place.
 Dr. Andrew Plummer Professor of Medicine and Chemistry in the University of Edinburgh, Secretary.
 Dr. William Porterfield.
 Dr. John Pringle Professor of Moral Philosophy in the University of Edinburgh.
 Mr. Thomas Ruddiman.
 Dr. John Rutherford Professor of Medicine in the University of Edinburgh.
 The Rt. Hon. Lord Sinclair.
 Mr. Charles St. Clair Advocate.
 Dr. Andrew St. Clair Professor of Medicine in the University of Edinburgh.
 Mr. David Scot of Scotstarvet Advocate.
 Dr. Thomas Simson Professor of Medicine and Anatomy in the University of St. Andrews.
 Mr. James Short Optician.
 Mr. Robert Steuart Professor of Natural Philosophy in the University of Edinburgh.
 Dr. John Stevenson.
 Mr. James Stirling.
 The Rt. Hon. the Viscount of Stormont.
 The Rev. Mr. Robert Wallace one of the Ministers of Edinburgh.

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* Now joint Professor of Chemistry in the University of Edinburgh.

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1889		* Alison, John, M.A., Secretary to the Edinburgh Mathematical Society, 33 Woodburn Terrace	
1888		* Allardice, R. E., M.A., 16 Nile Grove, Morningside	
1878		Allchin, W. H., M.B., F.R.C.P. L., Physician to the Westminster Hospital, 5 Chandos Street, Cavendish Square, London	
1856	B. P.	Allman, George J., M.D., F.R.S., M.R.I.A., F.L.S., Emeritus Professor of Natural History, University of Edinburgh, Ardmere, Parkstone, Dorset	10
1886		* Anderson, Arthur, M.D., C.B., Ex-Inspector-General of Hospitals, Pitlochry	
1874		Anderson, John, M.D., LL.D., F.R.S., late Superintendent of the Indian Museum and Professor of Comparative Anatomy in the Medical College, Calcutta, 71 Harrington Gardens, London	
1883		* Anderson, Robert Rowand, LL.D., 19 St Andrew Square	
1883	P.	Andrews, Thomas, Memb. Inst. C.E., F.R.S., F.C.S., Ravencrag, Wortley, near Sheffield	
1881		Anglin, A. H., M.A., LL.D., M.R.I.A., Professor of Mathematics, Queen's College, Cork	15

ALPHABETICAL LIST OF THE ORDINARY FELLOWS OF THE SOCIETY. 203

Date of Election			
1867		* Annandale, Thomas, M.D., F.R.C.S.E., Professor of Clinical Surgery in the University of Edinburgh, 34 Charlotte Square	
1883		Archibald, John, M.D., C.M., F.R.C.S.E., Woodhouse-Eaves, Loughborough	
1886		* Armstrong, George Frederick, Professor of Engineering in the University of Edinburgh	
1849		Argyll, His Grace the Duke of, K.G., K.T., D.C.L., LL.D., F.R.S. (HON. VICE-PRES.), Inveraray Castle	
1887		* Ashdown, Herbert H., M.B., 49 Upper Bedford Place, Russell Square, London	20
1885		* Baildon, H. Bellyse, B.A., Dunccliffe, Murrayfield, Edinburgh	
1879		* Bailey, James Lambert, Royal Bank of Scotland, Ardrossan	
1875		* Bain, Sir James, 3 Park Terrace, Glasgow	
1879		* Balfour, George W., M.D., LL.D., F.R.C.P.E., 7 Walker Street	
1877	P.	* Balfour, I. Bayley, Sc.D., M.D., C.M., F.R.S., Professor of Botany in the University of Edinburgh	25
1870		* Balfour, Thomas A. G., M.D., F.R.C.P.E., 51 George Square	
1889		* Barbour, A. H. F., M.A., M.D., F.R.C.P.E., 24 Melville Street	
1886		* Barclay, A. J. G., M.A., 5 Ethel Terrace	
1872		* Barclay, George, M.A., 17 Coates Crescent	
1883		* Barclay, G. W. W., M.A., 40 Princes Street	30
1887		Barlow, W. H., Memb. Inst. C.E., High Combe, Old Charlton, Kent	
1882		Barnes, Henry, M.D., 6 Portland Square, Carlisle	
1874		Barrett, William F., M.R.I.A., Professor of Physics, Royal College of Science, Dublin	
1889		Barry, T. D. Collis, Staff Surgeon, M.R.C.S., F.L.S., Prof. of Chemistry and Medical Jurisprudence to the Grant Medical College, Bombay, and Acting Chemical Adviser to the Indian Government	
1887		* Bartholomew, J. G., F.R.G.S., 12 Blackett Place	35
1857		Batten, Edmund Chisholm, of Aigas, M.A., Thornfaulcon, near Taunton, Somerset	
1880		* Bayly, General John, C.B., R.E., 58 Palmerston Place	
1888		* Beare, Thomas Hudson, B.Sc., Assoc. Memb. Inst. C.E., Professor of Engineering and Mechanical Technology in University College, Gower Street, London	
1882	P.	Beddard, Frank E., M.A. Oxon., Prosector to the Zoological Society of London, Zoological Society's Gardens, Regent's Park, London	
1887		* Begg, Ferdinand Faithful, 13 Earl's Court Square, London, S.W.	40
1886		* Bell, A. Beatson, Chairman of Prison Commission, 143 Princes Street	
1874		* Bell, Joseph, M.D., F.R.C.S.E., 2 Melville Crescent	
1888		* Bell, William James, of Scatwell, B.A., LL.M., F.C.S., Barrister-at-Law, Scatwell, Muir of Ord, and 1 Plowden Buildings, Temple, London	
1887		* Bernard, J. Mackay, 25 Chester Street	
1875		Bernstein, Ludwik, M.D., Lismore, New South Wales	45
1881		* Berry, Walter, K.D., Danish Consul-General, 11 Atholl Crescent	
1880		* Birch, De Burgh, M.D., Professor of Physiology, Yorkshire College, Victoria University 16 De Grey Terrace, Leeds	
1884		* Black, Rev. John S., 6 Oxford Terrace	
1850		Blackburn, Hugh, M.A., LL.D., Emeritus Professor of Mathematics in the University of Glasgow, Roshven, Ardgour	
1863	P.	Blackie, John S., Emeritus Professor of Greek in the University of Edinburgh, 9 Douglas Crescent	50

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Date of Election.			
1862		Blaikie, The Rev. W. Garden, M.A., D.D., LL.D., Professor of Apologetics and Pastoral Theology, New College, Edinburgh, 9 Palmerston Road	
1878	P.	* Blyth, James, M.A., Professor of Natural Philosophy in Anderson's College, Glasgow	
1884		Bond, Francis T., M.D., B.A., M.R.C.S., 1 Beaufort Buildings, Spa, Gloucester	
1872		* Bottomley, J. Thomson, M.A., F.R.S., F.C.S., Lecturer on Natural Philosophy in the University of Glasgow, 13 University Gardens, Glasgow	
1869		* Bow, Robert Henry, C.E., 7 South Gray Street	55
1886		* Bower, Frederick O., M.A., F.L.S., Regius Professor of Botany in the University of Glasgow, 45 Kerrsland Terrace, Hillhead, Glasgow	
1884		Bowman, Frederick Hungerford, D.Sc., F.R.A.S., F.C.S., F.L.S., F.G.S., West Mount, Halifax, Yorkshire	
1871		* Boyd, Sir Thomas J., Chairman of the Scottish Fishery Board, 41 Moray Place	
1873		* Boyd, William, M.A., Peterhead	
1886		* Bramwell, Byrom, M.D., F.R.C.P.E., 23 Drumsheugh Gardens	60
1886		Brittle, John Richard, Memb. Inst. C.E., Vanbrugh Hill, Blackheath, Kent	
1877		Broadrick, George, Memb. Inst. C.E., Hamphall, Stubs, near Doncaster	
1888	P.	* Brook, George, F.L.S., Lecturer on Comparative Embryology in the University of Edinburgh	
1887		* Brown, A. B., C.E., 19 Douglas Crescent	
1864	K. B. P.	Brown, Alex. Crum, M.D., D.Sc., F.R.C.P.E., F.R.S. (SECRETARY), Professor of Chemistry in the University of Edinburgh, 8 Belgrave Crescent	65
1881		* Brown, J. A. Harvie, of Quarter, Dunipace House, Larbert, Stirlingshire	
1883		* Brown, J. Graham, M.D., C.M., F.R.C.P.E., 16 Ainslie Place	
1885		* Brown, J. Macdonald, M.B., F.R.C.S.E., Apsley Lodge, 12 South Mansionhouse Road	
1861	P.	Brown, Rev. Thomas, D.D., 16 Carlton Street	
1870		Browne, Sir James Crichton, M.D., LL.D., F.R.S., 7 Cumberland Terrace, Regent's Park, London	70
1883		* Bruce, Alexander, M.A., M.B., M.R.C.P.E., 13 Alva Street	
1878		Brunlees, Sir James, Memb. Inst. C.E., 5 Victoria Street, Westminster	
1867		* Bryce, A. H., LL.D., D.C.L., 42 Moray Place	
1888		* Bryson, William A., Electrical Engineer, 196 St Vincent Street, Glasgow	
1869	B. P.	* Buchan, Alexander, M.A., LL.D., Secretary to the Scottish Meteorological Society (CURATOR OF LIBRARY), 72 Northumberland Street	75
1870	K. P.	* Buchanan, John Young, M.A., F.R.S., 10 Moray Pl., Edinburgh, and Christ's Coll., Cambridge	
1882		* Buchanan, T. R., M.A., M.P. for the West Division of the City of Edinburgh, 10 Moray Place, Edinburgh, and 36 Upper Brook Street, London	
1887		* Buist, J.B., M.D., F.R.C.P.E., 1 Clifton Terrace	
1887		* Burnet, John James, Architect, 1 Granby Place, Hillhead, Glasgow	
1888		* Burns, Rev. T., F.S.A. Scot., Minister of Lady Glenorchy's Parish Church, 13 Cumin Pl.	80
1887		* Burton, Cosmo Innes, B.Sc., F.C.S., 6 Montpellier, Viewforth, Edinburgh	
1883		* Butcher, S. H., M.A., LL.D., Prof. of Greek in the University of Edin., 27 Palmerston Pl.	
1887	P.	* Cadell, Henry Moubray, of Grange, Bo'ness, B.Sc.	
1869		* Calderwood, Rev. H., LL.D., Professor of Moral Philosophy in the University of Edinburgh, Napier Road, Merchiston	
1879		* Calderwood, John, F.I.C., Belmont Works, Battersea, and Gowanlea, Spencer Park, Wandsworth, London, S.W.	85
1878		Campbell, John Archibald, M.D., Garland's Asylum, Carlisle	

ALPHABETICAL LIST OF THE ORDINARY FELLOWS OF THE SOCIETY. 205

Date of Election.			
1874		Carrington, Benjamin, M.D., Eccles, Lancashire	
1882		* Cay, W. Dyce, Memb. Inst. C.E., 107A Princes Street	
1876		* Cazenove, The Rev. John Gibson, M.A., D.D., 22 Alva Street, Chancellor of St Mary's Cathedral	
1866		* Chalmers, David, Redhall, Slateford	90
1874		* Chiene, John, M.D., F.R.C.S.E., Professor of Surgery in the University of Edinburgh, 26 Charlotte Square	
1875		* Christie, John, 19 Buckingham Terrace	
1872		Christie, Thomas B., M.D., F.R.C.P.E., Royal India Asylum, Ealing, London	
1880	K. P.	* Chrystal, George, M.A., LL.D., Professor of Mathematics in the University of Edinburgh, VICE-PRESIDENT, 5 Belgrave Crescent	
1875		* Clark, Robert, 7 Learmonth Terrace	95
1886		* Clark, Sir Thomas, Bart., 11 Melville Crescent	
1863	P.	Cleghorn, Hugh F. C., of Stravithie, M.D., LL.D., F.L.S., St Andrews, United Service Club, 14 Queen Street	
1875		* Clouston, T. S., M.D., F.R.C.P.E., Tipperlin House, Morningside	
1882		* Coats, Sir Peter, of Auchendrane, President of the Glasgow and West of Scotland Horticultural Society, Auchendrane, Ayr	
1887		* Cockburn, John, F.R.A.S., 6 Atholl Crescent	100
1888		Collie, John Norman, Ph.D., F.C.S., University College, London	
1886		Connan, Daniel M., M.A., Education Department, Cape of Good Hope	
1872		* Constable, Archibald, 11 Thistle Street	
1879		* Cox, Robert, of Gorgie, M.A., 34 Drumsheugh Gardens	
1875		* Craig, William, M.D., F.R.C.P.E., F.R.C.S.E., Lecturer on Materia Medica to the College of Surgeons, 7 Bruntsfield Place	105
1886		* Croom, John Halliday, M.D., F.R.C.P.E., 25 Charlotte Square	
1887		* Crawford, William Caldwell, Lockharton Gardens, Slateford, Edinburgh	
1887		* Cumming, A. S., M.D., F.R.C.P.E., 18 Ainslie Place	
1878		* Cunningham, Daniel John, M.D., Professor of Anatomy in Trinity College, 69 Harcourt Street, Dublin	
1886		* Cunningham, David, Memb. Inst. C.E., Harbour Chambers, Dock Street, Dundee	110
1877		* Cunningham, George Miller, Memb. Inst. C.E., 2 Ainslie Place	
1884	P.	* Cunningham, J. T., B.A., Marine Biological Laboratory, Plymouth	
1871		* Cunynghame, R. J. Blair, M.D., 18 Rothesay Place	
1885		* Daniell, Alfred, M.A., LL.B., D.Sc., Advocate, 3 Great King Street	
1867		* Davidson, David, Somerset Lodge, Wimbledon Common, Wimbledon	115
1884		Davy, Richard, F.R.C.S., Surgeon to the Westminster Hospital, 33 Welbeck St., Cavendish Square, London	
1870		* Day, St John Vincent, C.E.	
1876		* Denny, Peter, Memb. Inst. C.E., Dumbarton	
1869	P.	* Dewar, James, M.A., F.R.S., Jacksonian Professor of Natural and Experimental Philosophy in the University of Cambridge, and Fullerian Professor of Chemistry at the Royal Institution of Great Britain, London	
1884		* Dickson, Charles Scott, Advocate, 4 Heriot Row	120
1888		* Dickson, H. N., 38 York Place	
1876	P.	* Dickson, J. D. Hamilton, M.A., Fellow and Tutor, St Peter's College, Cambridge	

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Date of Election.			
1863	P.	Dittmar, W., LL.D., F.R.S., Professor of Chemistry, Anderson's College, 11 Hillhead Street, Glasgow	
1885		Dixon, J. M., M.A., Prof. of English Literature in the University of Tokio, Japan	
1881		* Dobbin, Leonard, Ph.D., 16 Kilmaurs Road	125
1867	P.	* Donaldson, J., M.A., LL.D., Principal of the United College of St Salvador and St Leonard, St Andrews	
1882		* Dott, D. B., Memb. Pharm. Soc., 7 Victoria Terrace, Musselburgh	
1866		* Douglas, David, 22 Drummond Place	
1880		* Drummond, Henry, F.G.S., Professor of Natural History in the Free Church College, 3 Park Circus, Glasgow	
1860		Dudgeon, Patrick, of Cargen, Dumfries	130
1863	P.	Duncan, J. Matthews, M.A., M.D., F.R.C.P.E. (Lond. and Edin.), LL.D., F.R.S., 71 Brook Street, London	
1876		* Duncan, James, of Benmore, Kilnrun, 9 Mincing Lane, London	
1889		* Duncan, James Dalrymple, F.S.A. Scot., 211 Hope Street, Glasgow	
1870		* Duncan, John, M.D., F.R.C.P.E., F.R.C.S.E., 8 Ainslie Place	
1878		* Duncanson, J. J. Kirk, M.D., F.R.C.P.E., 22 Drumsheugh Gardens	135
1859		Duns, Rev. Professor, D.D., New College, Edinburgh, 14 Greenhill Place	
1888		* Durham, James, F.G.S., Wingate Place, Newport, Fife	
1874		* Durham, William, Seaforth House, Portobello	
1869		* Elder, George, Knock Castle, Wemyss Bay, Greenock	
1885		* Elgar, Francis, Memb. Inst. C.E., LL.D., The Admiralty, London	140
1875		Elliot, Daniel G., New York	
1880		* Elliot, T. Armstrong, M.A., 6 Sanderson Road, Newcastle-on-Tyne	
1855		Etheridge, Robert, F.R.S., Assistant-Keeper of the Geological Department at the British Museum of Natural History, 14 Carlyle Square, Chelsea, London	
1884		* Evans, William, F.F.A., 18A Morningside Park, Edinburgh	
1863	P.	Everett, J. D., M.A., D.C.L., F.R.S., Prof. of Nat. Philosophy, Queen's Coll., Belfast	145
1879		* Ewart, James Cossar, M.D., F.R.C.S.E., Professor of Natural History, University of Edinburgh, 2 Belford Park	
1878	P.	* Ewing, James Alfred, B.Sc., F.R.S., Professor of Engineering and Drawing in University College, Dundee	
1875		Fairley, Thomas, Lecturer on Chemistry, 8 Newton Grove, Leeds	
1888	P.	* Fawsitt, Charles A., 4 Maule Terrace, Partick, Glasgow	
1859		Fayrer, Sir Joseph, K.C.S.I., M.D., F.R.C.P.L., F.R.C.S.L. and E., LL.D., F.R.S., Honorary Physician to the Queen, 53 Wimpole Street, London	150
1883		* Felkin, Robert W., M.D., F.R.G.S., Fellow of the Anthropological Society of Berlin 20 Alva Street, Edinburgh	
1888		* Ferguson, John, M.A., LL.D., Professor of Chemistry in the University of Glasgow	
1868		* Ferguson, Robert M., Ph.D., 12 Moray Place	
1874		* Ferguson, William, of Kinmundy, F.L.S., F.G.S., Kinmundy House, Mintlaw	
1886		Field, C. Leopold, F.C.S., Upper Marsh, Lambeth, London	
1852		Fleming, Andrew, M.D., Deputy Surgeon-General, 3 Napier Road	
1876		* Fleming, J. S., 16 Grosvenor Crescent	

ALPHABETICAL LIST OF THE ORDINARY FELLOWS OF THE SOCIETY. 207

Date of Election.			
1880		* Flint, Robert, D.D., Corresponding Member of the Institute of France, Corresponding Member of the Royal Academy of Sciences of Palermo, Professor of Divinity in the University of Edinburgh (VICE-PRESIDENT), Johnstone Lodge, 54 Craigmillar Park	
1872		Forbes, George, Professor, M.A., Memb. Inst. C.E., M.S.T.E. and E., F.R.S., F.R.A.S., 34 Great George Street, Westminster	
1859		Forlong, Major-Gen. J. G., F.R.G.S., R.A.S., Assoc. C.E., &c., 11 Douglas Crescent	160
1828		Foster, John, Liverpool	
1887		Fowler, Sir John, Memb. Inst. C.E., LL.D., Thornwood Lodge, Kensington, London	
1858		Fraser, A. Campbell, M.A., LL.D., D.C.L., Professor of Logic and Metaphysics in the University of Edinburgh, Gorton House, Hawthornden	
1867	B. P.	* Fraser, Thomas R., M.D., F.R.C.P.E., F.R.S., Professor of Materia Medica in the University of Edinburgh, 13 Drumsheugh Gardens	
1885		* Fraser, A. Y., M.A., care of Dr Kennedy, 25 Newington Road, Edinburgh	165
1888		* Galt, Alexander, B.Sc., F.C.S., Gowanbrae, Dunoon	
1867		Gayner, Charles, M.D., Oxford	
1889		* Geddes, George H., Mining Engineer, 8 Douglas Crescent	
1880	P.	* Geddes, Patrick, Professor of Botany in University College, Dundee, and Lecturer on Zoology, 6 James' Court, Lawnmarket	
1861	B. P.	Geikie, Archibald, LL.D., F.R.S., F.G.S., Corresponding Member of the Royal Academy of Berlin, Director of the Geological Surveys of Great Britain, and Head of the Geological Museum, 28 Jermyn Street, London	170
1871	B. P.	* Geikie, James, LL.D., D.C.L., F.R.S., F.G.S., Professor of Geology in the University of Edinburgh, 31 Merchiston Avenue	
1881		* Gibson, G. A., D.Sc., M.D., F.R.C.P.E., 17 Alva Street	
1877		* Gibsior, John, Ph.D., 15 Dick Place	
1885	P.	* Gibson, R. J. Harvey, M.A., Lecturer on Botany, Victoria University, 15 Sydenham Avenue, Sefton Park, Liverpool	
1887		* Gilmour, William, 10 Elm Row	175
1879		* Gilray, Thomas, M.A., Professor of English Language and Literature in the University of Otago, New Zealand	
1880		* Gilruth, George Ritchie, Surgeon, 48 Northumberland Street	
1850		Gosset, Major-General W. D., R.E., 70 Edith Road, West Kensington, London	
1867		* Graham, Andrew, M.D., R.N., Army and Navy Club, 36 Pall Mall, London	
1880		* Graham, James, 198 West George Street, Glasgow	180
1851		Grant, The Rev. James, D.D., D.C.L., 15 Palmerston Place	
1883		* Gray, Andrew, M.A., Professor of Physics in University College, Bangor, North Wales	
1880	P.	Gray, Thomas, B.Sc., Professor of Physics, Rose Polytechnic Institute, Indiana, U.S.	
1886		* Greenfield, W. S., M.D., Professor of General Pathology in the University of Edinburgh, 7 Heriot Row	
1884		* Grieve, John, M.A., M.D., F.L.S., 212 St Vincent Street, Glasgow	185
1886		* Griffiths, Arthur Bower, Ph.D., Lecturer on Chemistry in the School of Science of the City and County of Lincoln, Richmond House, Charlotte Road, Edgbaston, Birmingham	
1883		Gunning, R. H., Grand Dignitary of the Order of the Rose of Brazil, M.D., LL.D., 12 Addison Crescent, Kensington	
1888	P.	Guppy, Henry Brougham, M.B., 17 Woodlane, Falmouth	
1886		* Haddington, The Right Hon. the Earl of, Tynninghame House, Haddington	

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Date of Election.			
1867		* Hallen, James H. B., F.R.C.S.E., F.R.P.S.E., Inspecting Veterinary Surgeon in H.M. Indian Army, Pebworth, near Stratford-on-Avon	190
1881	P.	* Hamilton, D. J., M.B., F.R.C.S.E., Professor of Pathological Anatomy in the University of Aberdeen, 1a Albyn Place, Aberdeen	
1876	P.	* Hannay, J. Ballantyne, Cove Castle, Loch Long	
1886		* Hare, Arthur W., M.B., F.R.C.S.E., Professor of Surgery, Owens College, 3 Adelphi Terrace, Salford, Manchester	
1888		* Hart, D. Berry, M.D., F.R.C.P.E., 29 Charlotte Square	
1869		Hartley, Sir Charles A., K.C.M.G., Memb. Inst. C.E., 26 Pall Mall, London	195
1877		Hartley, Walter Noel, F.R.S., Professor of Chemistry, Royal College of Science for Ireland, Dublin	
1875		Hawkshaw, Sir John, Memb. Inst. C.E., F.R.S., F.G.S., 33 Great George Street, Westminster	
1880	P.	* Haycraft, J. Berry, M.D., D.Sc., Lecturer on Physiology in the University of Edinburgh, 20 Ann Street	
1870		Heathfield, W. E., F.C.S., 1 Powis Grove, Brighton	
1862		Hector, Sir James, K.C.M.G., M.D., F.R.S., Director of the Geological Survey, Wellington, New Zealand	200
1876	K. P.	* Heddle, M. Forster, M.D., Emeritus Professor of Chemistry in the University of St Andrews	
1884		* Henderson, John, jun., Meadowside Works, Partick, Glasgow	
1881	N. P.	* Herdman, W. A., D.Sc., Professor of Natural History in University College, Liverpool	
1889		Hewitt, William Morse Graily, M.D., Emeritus Professor of Obstetric Medicine in University College, London, 36 Berkeley Square, London	
1871		Higgins, Charles Hayes, M.D., M.R.C.P., F.R.C.S., Alfred House, Birkenhead	205
1859		Hills, John, Lieut.-Colonel, C.B., Bombay Engineers, United Service Club, London	
1879		Hislop, John, Secretary to the Department of Education, Wellington, New Zealand	
1885		Hodgkinson, W. R., Ph.D., F.I.C., F.C.S., Professor of Chemistry and Physics at the Royal Military Academy and Royal Artillery College, Woolwich, 75 Vanbrugh Park, Blackheath, London	
1828	P.	Home, David Milne, of Milne-Graden, LL.D., F.G.S., 10 York Place	
1881	P.	* Horne, John, F.G.S., Geological Survey of Scotland, 41 Southside Road, Inverness	210
1883	P.	* Hoyle, William Evans, M.A., M.R.C.S., 25 Brunswick Road, Withington, Manchester	
1886		Hunt, Rev. H. G. Bonavia, Mus. D. Dublin, Mus. B. Oxon., F.L.S., La Belle Sauvage, London	
1872		* Hunter, Lieut.-Col. Chas., Pläs Cöch, Llanfairpwll, Anglesea, and 17 St George's Sq., London	
1887		* Hunter, James, F.R.C.S.E., F.R.A.S., 20 Craigmillar Park	
1887		* Hunter, William, M.D.	215
1864		Hutchison, Robert (Carlowrie Castle), and University Club	
1855		Inglis, Right Hon. John, LL.D., D.C.L., Lord Justice-General of Scotland, and Chancellor of the University of Edinburgh, 30 Abercromby Place	
1882		* Inglis, J. W., Memb. Inst. C.E., 19 Montpelier, Edinburgh	
1874		* Irvine, Alex. Forbes, of Drum, LL.D., Advocate, Sheriff of Argyll (VICE-PRESIDENT), 25 Castle Terrace	
1886		* Irvine, Robert, Royston, Granton, Edinburgh	220
1875		Jack, William, M.A., LL.D., Professor of Mathematics in the University of Glasgow	

ALPHABETICAL LIST OF THE ORDINARY FELLOWS OF THE SOCIETY. 209

Date of Election.			
1889		* James, Alexander, M.D., F.R.C.P.E., 44 Melville Street	
1882		* Jamieson, A., Memb. Inst. C.E., Professor of Engineering in The Glasgow and West of Scotland Technical College, Glasgow	
1860		Jamieson, George Auldjo, Actuary, 24 St Andrew Square	
1880		Japp, A. H., LL.D., The Limes, Elmstead, near Colchester	225
1865		Jenner, Charles, Easter Duddingston Lodge	
1869		Johnston, John Wilson, M.D., Surgeon-Major, Dacre House, Shrewsbury Road, Oxtou, Birkenhead	
1867		* Johnston, T. B., F.R.G.S., Geographer to the Queen, 9 Claremont Crescent	
1874		Jones, Francis, Lecturer on Chemistry, Monton Place, Manchester	
1888		Jones, John Alfred, Memb. Inst. C.E., Vice-President, and Engineer, City of Madras, Peter's Road, Madras	230
1877		* Jolly, William, H.M. Inspector of Schools, F.G.S., Ardgowan, Pollokshields	
1866		* Keiller, Alexander, M.D., F.R.C.P.E., LL.D., 21 Queen Street	
1886	P.	* Kidston, Robert, F.G.S., 24 Victoria Place, Stirling	
1877		* King, Sir James, of Campsie, Bart., LL.D., 12 Claremont Terrace, Glasgow	
1880		* King, W. F., Lonend, Russell Place, Trinity	235
1886		* Kingsburgh, The Right Hon. Lord, C.B., LL.D., F.R.S., M.S.T.E. and E., Lord Justice-Clerk, and Lord President of the Second Division of the Court of Session, 15 Abercromby Place	
1883		* Kinnear, The Hon. Lord, one of the Senators of the College of Justice, 2 Moray Place	
1878		* Kintore, The Right Hon. the Earl of, M.A. Cantab., Keith Hall, Inglismaldie Castle, Laurencekirk	
1880	P.	* Knott, C. G., D.Sc., Prof. of Natural Philosophy in the Imperial University of Tokio, Japan	
1875		* L'Amy, John Ramsay, of Dunkenny, Forfarshire, 107 Cromwell Road, London	240
1886		* Laing, Rev. George, 17 Buckingham Terrace	
1878		* Lang, P. R. Scott, M.A., B.Sc., Professor of Mathematics in the University of St Andrews	
1885		* Laurie, A. P., B.A., B.Sc., Lecturer on Chemistry at the People's Palace Technical School, London	
1870		* Laurie, Simon S., M.A., Professor of Education in the University of Edinburgh, Nairne Lodge, Duddingstone	
1881		* Lawson, Robert, M.D., Deputy-Commissioner in Lunacy, 24 Mayfield Terrace	245
1872		* Lee, Alexander H., C.E., Blairhoyle, Stirling	
1872		* Lee, The Hon. Lord, one of the Senators of the College of Justice, 12 Rothesay Place	
1882		* Leslie, Alexander, Memb. Inst. C.E., 12 Greenhill Terrace	
1883		* Leslie, George, M.B., C.M., Old Manse, Falkirk	
1863		Leslie, Hon. G. Waldegrave, Leslie House, Leslie	250
1858		Leslie, James, Memb. Inst. C.E., 2 Charlotte Square	
1874	P.	* Letts, E. A., Ph.D., F.I.C., F.C.S., Professor of Chemistry, Queen's College, Belfast	
1889		* Lindsay, Rev. James, B.D., B.Sc., F.G.S., Minister of St Andrews Parish, Springhill Terrace, Kilmarnock	
1870	B. P.	* Lister, Sir Joseph, Bart., M.D., F.R.C.S.L., F.R.C.S.E., LL.D., D.C.L., F.R.S., Professor of Clinical Surgery, King's College, Surgeon Extraordinary to the Queen, 12 Park Crescent, Portland Place, London	
1882		* Livingston, Josiah, 4 Minto Street	255

210 ALPHABETICAL LIST OF THE ORDINARY FELLOWS OF THE SOCIETY.

Date of Election.			
1861	P.	Lorimer, James, M.A., Advocate, Professor of Public Law in the University of Edinburgh, 1 Bruntsfield Crescent	
1884		* Low, George M., Actuary, 15 Chester Street	
1888		* Lowe, D. F., M.A., Headmaster of Heriot's Hospital School, Lauriston	
1849		Lowe, W. H., M.D., F.R.C.P.E., Woodcote, Inner Park, Wimbledon	
1886		Lyster, George Fosbery, Memb. Inst. C.E., Gisburn House, Liverpool	260
1855		Macadam, Stevenson, Ph.D., Lecturer on Chemistry, Surgeons' Hall, Edinburgh, 11 East Brighton Crescent, Portobello	
1888		* Macadam, W. Ivison, Lecturer on Chemistry, 6 East Brighton Crescent, Portobello	
1887		M'Aldowie, Alexander M., M.D., Brook Street, Stoke-on-Trent	
1888	P.	M'Arthur, John, Battersea, London	
1885		* M'Bride, Charles, M.D., Wigtown	265
1883		* M'Bride, P., M.D., F.R.C.P.E., 16 Chester Street	
1867		* M'Candlish, John M., W.S., 27 Drumsheugh Gardens	
1886		* Macdonald, William J., M.A., 6 Lockharton Terrace	
1847		Macdonald, W. Macdonald, of St Martin's, Perth	
1888		* M'Fadyean, John, M.B., B.Sc., Lecturer on Anatomy, 9 East Hermitage Place, Leith	270
1878	P.	Macfarlane, Alex., M.A., D.Sc., LL.D., Professor of Physics in the University of the State of Texas, Austin, Texas	
1885	P.	* Macfarlane, J. M., D.Sc., 15 Scotland Street	
1877		* Macfie, Robert A., Dreghorn Castle, Colinton	
1878		* M'Gowan, George, F.I.C., Ph.D., University College of North Wales, Bangor	
1886		* MacGregor, Rev. James, D.D., 11 Cumin Place, Grange	275
1880	P.	MacGregor, J. Gordon, M.A., D.Sc., Professor of Physics in Dalhousie College, Halifax, Nova Scotia	
1879		* M'Grigor, Alexander Bennett, LL.D., 19 Woodside Terrace, Glasgow	
1869	N. P.	* M'Intosh, William Carmichael, M.D., LL.D., F.R.S., F.L.S., Professor of Natural History in the University of St Andrews, 2 Abbotsford Crescent, St Andrews	
1882		* Mackay, John Sturgeon, M.A., LL.D., Mathematical Master in the Edinburgh Academy, 69 Northumberland Street	
1873	P.	* M'Kendrick, John G., M.D., F.R.C.P.E., LL.D., F.R.S., Professor of the Institutes of Medicine in the University of Glasgow	280
1840		Mackenzie, John, New Club, Princes Street	
1843	P.	MacLagan, Sir Douglas, M.D., F.R.C.S.E., Professor of Medical Jurisprudence in the University of Edinburgh (VICE-PRESIDENT), 28 Heriot Row	
1853		MacLagan, General R., Royal Engineers, LL.D., 4 West Cromwell Road, S. Kensington, London, S.W.	
1869		* MacLagan, R. Craig, M.D., 5 Coates Crescent	
1864		M'Lagan, Peter, of Pumpherston, M.P., Clifton Hall, Ratho	285
1869	P.	* M'Laren, The Hon. Lord, LL.D. Edin. and Glasg., F.R.A.S., one of the Senators of the College of Justice (VICE-PRESIDENT), 46 Moray Place	
1888		* Maclean, Magnus, M.A., Assistant to the Professor of Natural Philosophy in the University of Glasgow, 21 Hayburn Crescent, Partick	
1870		* Macleod, Sir George H.B., M.D., F.R.C.S.E., Regius Prof. of Surgery in the University of Glasgow, and Surgeon in Ordinary to the Queen in Scotland, 10 Woodside Crescent, Glasgow	

ALPHABETICAL LIST OF THE ORDINARY FELLOWS OF THE SOCIETY. 211

Date of Election.			
1876		* Macleod, Rev. Norman, D.D., 7 Royal Circus	
1883		* Macleod, W. Bowman, L.D.S., 16 George Square	290
1872		* Macmillan, Rev. Hugh, D.D., LL.D., Seafield, Greenock	
1876		* Macmillan, John, M.A., B.Sc., 1 West Montgomery Place	
1884		* Macpherson, Rev. J. Gordon, M.A., D.Sc., Ruthven Manse, Meigle	
1883		* McRoberts, George, F.C.S., Bath House, Ardrossan, Ayrshire	
1888		Mactear, James, F.C.S., 2 Victoria Mansions, Hyde Park, London	295
1858		Malcolm, R. B., M.D., F.R.C.P.E., 126 George Street	
1880	P.	Marsden, R. Sydney, M.B., C.M., D.Sc., F.I.C., F.C.S., Pembroke House, King Street, Stockton-on-Tees	
1882	P.	Marshall, D. H., M.A., Professor of Physics in Queen's University and College, Kingston, Ontario, Canada	
1869		Marshall, Henry, M.D., Clifton, Bristol	
1888		* Marshall, Hugh, D.Sc., Assistant to the Professor of Chemistry in the University of Edinburgh, 1 Lorne Terrace	300
1864		Marwick, Sir James David, LL.D., Town-Clerk, Glasgow	
1866		* Masson, David, LL.D., Professor of Rhetoric and English Literature in the University of Edinburgh, 58 Great King Street	
1885	P.	* Masson, Orme, D.Sc., Professor of Chemistry in the University of Melbourne	
1883		* Matthews, James Duncan, Springhill, Aberdeen	
1888		* Methven, C. W., Memb. Inst. C.E., Engineer's Office, Harbour Works, Port Natal	305
1885		* Mill, Hugh Robt., D.Sc., F.C.S., Scot. Marine Station, Granton, Braid Road, Morningside, Edinburgh	
1886		* Miller, Hugh, H.M. Geological Survey Office, George IV. Bridge	
1852		Miller, Thomas, M.A., LL.D., Emeritus Rector of Perth Academy, Inchbank House, Perth	
1833		Milne, Admiral Sir Alexander, Bart., G.C.B., Inveresk	
1886		* Milne, William, M.A., B.Sc., Mathematical and Science Teacher, High School, Glasgow	310
1866		* Mitchell, Sir Arthur, K.C.B., M.A., M.D., LL.D., Commissioner in Lunacy (VICE-PRESIDENT), 34 Drummond Place	
1889	P.	* Mitchell, A. Crichton, B.Sc., 2 Baxter's Place	
1865		Moir, John J. A., M.D., F.R.C.P.E., 52 Castle Street	
1870		* Moncreiff, The Right Hon. Lord, of Tullibole, LL.D., (HONORARY VICE-PRESIDENT), 15 Great Stuart Street	
1871		* Moncrieff, Rev. Canon William Scott, of Fossaway, Christ's Church Vicarage, Bishop-Wearmouth, Sunderland	315
1868		* Montgomery, Very Rev. Dean, M.A., D.D., 17 Atholl Crescent	
1887		Moos, Nanabhai A. F., L.C.E., B.Sc., Assistant Professor of Engineering, College of Science, Bombay	
1887		More, Alexander Goodman, M.R.I.A., F.L.S., 74 Leinster Road, Dublin	
1873		* Muir, M. M. Pattison, Prælector on Chemistry, Caius College, Cambridge	
1874	K.P.	* Muir, Thomas, M.A., LL.D. (VICE-PRESIDENT), Mathematical Master, High School, Glasgow, Beechcroft, Bothwell, Glasgow	320
1888		* Muirhead, George, Mains of Haddo, Aberdeen	
1877		Mukhopādhyay, Âsútosh, M.A., F.R.A.S., Examiner in Mathematics in the University of Calcutta, Professor of Mathematics at the Indian Association for the Cultivation of Science, 77 Russa Road North, Bhowanipore, Calcutta	
1870		* Munn, David, M.A., 2 Ramsay Gardens	

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Date of Election.			
1889		* Munro, Rev. Robert, M.A., B.D., F.S.A. Scot., Free Church Manse, Old Kilpatrick	
1857		Murray, John Ivor, M.D., F.R.C.S.E., M.R.C.P.E., 24 Huntriss Row, Scarborough	325
1877	N. P.	* Murray, John, LL.D., Ph.D., Director of the Challenger Expedition Commission, 32 Queen Street, and United Service Club	
1888		* Murray, R. Milne, M.A., M.B., F.R.C.P.E., 10 Hope Street	
1887		Muter, John, M.A., F.C.S., Winchester House, 397 Kennington Road, London	
1884		Mylne, R. W., C.E., F.R.S., 7 Whitehall Place, London	
1888		Napier, A. D. Leith, M.D., C.M., M.R.C.P. L., 67 Grosvenor Street, Grosvenor Square, London	330
1877		* Napier, John, C. Audley Mansions, Grosvenor Square, London	
1887		* Nasmyth, T. Goodall, M.B., C.M., D.Sc., Foulford, Cowdenbeath, Fife	
1866		* Nelson, Thomas, St Leonard's, Dalkeith Road	
1883		* Newcombe, Henry, F.R.C.S.E., 5 Dalrymple Crescent, Edinburgh	
1884		* Nicholson, J. Shield, Professor of Political Economy in the University of Edinburgh, Eden Lodge, Eden Lane, Newbattle Terrace	335
1880	P.	* Nicol, W. W. J., M.A., D.Sc., Lecturer on Chemistry, Mason College, Birmingham	
1878		Norris, Richard, M.D.	
1888		* Ogilvie, F. Grant, M.A., B.Sc., Principal of the Heriot-Watt College, 27 Blacket Place	
1888		* Oliphant, James, M.A., 50 Palmerston Place	
1886		Oliver, James, M.D., C.M., M.R.C.P., Assistant Physician, Hospital for Women, 18 Gordon Square, London	340
1884		* Omond, Robert Traill, Superintendent of Ben Nevis Observatory, Fort-William, Inverness	
1877		Panton, George A., 73 Westfield Road, Edgbaston, Birmingham	
1886		* Paton, D. Noel, M.D., B.Sc., F.R.C.P.E., 4 Walker Street	
1889		* Patrick, David, M.A., 25 Gillespie Crescent	
1881	N.P.	* Peach, B. N., F.G.S., Acting Palaeontologist of the Geological Survey of Scotland, 13 Dalrymple Crescent	345
1889		* Peck, William, F.R.A.S., Town's Astronomer, Murrayfield, Edinburgh	
1863		Peddie, Alexander, M.D., F.R.C.P.E., 15 Rutland Street	
1887		* Peddie, Wm., D.Sc., Assistant to the Professor of Natural Philosophy, Edinburgh University	
1886		* Peebles, D. Bruce, Tay House, Bonnington, Edinburgh	
1869		Pender, Sir John, 18 Arlington Street, Piccadilly, London	350
1888		* Perkin, W. H., junior, Ph.D., Prof. of Chemistry in the Heriot-Watt College	
1889		* Philip, R. W., M.A., M.D., F.R.C.P.E., 4 Melville Crescent	
1883		Phillips, Charles D. F., M.D., 10 Henrietta Street, Cavendish Square, London, W.	
1859	P.	Playfair, The Right Hon. Sir Lyon, K.C.B., M.P., LL.D., F.R.S., 68 Onslow Gardens, London	
1877		Pole, William, Memb. Inst. C.E., Mus. Doc., F.R.S., 31 Parliament St., Westminster	355
1886		* Pollock, Charles Frederick, M.D., F.R.C.S.E., 1 Buckingham Terr., Hillhead, Glasgow	
1874		Powell, Baden Henry Baden-, Forest Department, India	
1852		Powell, Eyre B., C.S.I., M.A., 28 Park Road, Haverstock Hill, Hampstead, London	
1888		Prain, David, Surgeon, Indian Medical Service, and Curator of the Herbarium, Royal Botanic Gardens, Shibpur, Calcutta	
1880		* Prentice, Charles, Actuary, C.A., Edinburgh, Athenæum, Glasgow	360
1875		Prevost, E. W., Ph.D., The Poplars, Shuttington, Tamworth	

ALPHABETICAL LIST OF THE ORDINARY FELLOWS OF THE SOCIETY. 213

Date of Election.			
1849		Primrose, Hon. B. F., C.B., 22 Moray Place	
1882		* Pryde, David, M.A., LL.D., Head Master of the Ladies' College, 10 Fettes Row, Edinburgh	
1885		* Pullar, J. F., Rosebank, Perth	
1880		* Pullar, Robert, Tayside, Perth	365
1884		Ramsay, E. Peirson, M.R.I.A., F.L.S., C.M.Z.S., F.R.G.S., F.G.S., Fellow of the Imperial and Royal Zool. and Bot. Soc. of Vienna, Curator of Australian Museum, Sydney, N.S.W.	
1882		* Rattray, James Clerk, M.D., 61 Grange Loan	
1885	P.	* Rattray, John, M.A., B.Sc., 31 Belsize Avenue, South Hampstead, London	
1869		Raven, Rev. Thomas Milville, M.A., The Vicarage, Crakehall, Bedale	
1883		* Readman, J. B., D.Sc., F.C.S., 9 Moray Place	370
1889		Redwood, Boverton, Glenwathen, Ballard's Lane, Finchley, Middlesex	
1875		* Richardson, Ralph, W.S., 10 Magdala Place	
1872		Ricarde-Seaver, Major F. Ignacio, Conservative Club, St James' Street, London and 2 Rue Laffitte, Boulevard des Italiens, Paris	
1883		* Ritchie, R. Peel, M.D., Pres. R.C.P.E., 1 Melville Crescent	
1880		Roberts, D. Lloyd, M.D., F.R.C.P.L., 23 St John Street, Manchester	375
1872		* Robertson, D. M. C. L. Argyll, M.D., F.R.C.S.E., Surgeon Oculist to the Queen for Scotland, and President of the Royal College of Surgeons, 18 Charlotte Square	
1859		Robertson, George, Memb. Inst. C.E., Athenæum Club, Pall Mall, London	
1886		* Robertson, Right Hon. J. P. B., Q.C., LL.D., M.P., Lord Advocate of Scotland, 19 Drumshough Gardens	
1877	P.	* Robinson, George Carr, F.I.C., Lecturer on Chemistry in the College of Chemistry, Royal Institution, Hull	
1881		* Rogerson, John Johnston, B.A., LL.B., Merchiston Castle Academy	380
1881		Rosebery, The Right Hon. the Earl of, LL.D., Dalmeny Park, Edinburgh	
1880		Rowland, L. L., M.A., M.D., President of the Oregon State Medical Society, and Professor of Physiology and Microscopy in Willamette University, Salem, Oregon	
1880		* Russell, J. A., M.A., B.Sc., M.B., F.R.C.P.E., Woodville, Canaan Lane	
1869	P.	* Rutherford, Wm., M.D., F.R.C.P.E., F.R.S., Professor of the Institutes of Medicine in the University of Edinburgh, 14 Douglas Crescent	
1863		Sanderson, James, Deputy Inspector-General of Hospitals, F.R.C.S.E., 8 Manor Place	385
1864		Sandford, The Right Rev. Bishop D. F., LL.D., Boldon Rectory, Newcastle-on-Tyne	
1849	B. P.	Sang, Edward, C.E., LL.D., 31 Mayfield Road	
1846		Schmitz, Leonard, LL.D., 53 Gloucester Road, Regent's Park, London	
1887		* Schulze, Adolf P., 2 Doune Gardens, Kelvinside, Glasgow	
1885		Scott, Alexander, M.A., D.Sc., 4 North Bailey, Durham	390
1880		Scott, J. H., M.B., C.M., M.R.C.S., Professor of Anatomy in the University of Otago, New Zealand	
1888		* Scott, John, C.B., Shipbuilder, Hawkhill, Greenock	
1875		Scott, Michael, Memb. Inst. C.E., care of Alexander Grahame, Esq., 30 Great George Street, Westminster	
1889		* Scougal, Andrew E., M.A., H.M. Inspector of Schools, 12 Blantyre Terrace	
1864		Sellar, W. Y., M.A., LL.D., Professor of Humanity in the University of Edinburgh, 15 Buckingham Terrace	395
1872		* Seton, George, M.A., Advocate, 42 Greenhill Gardens	

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Date of Election.			
1887		* Sexton, A. H., F.C.S., Professor of Chemistry, College of Science and Arts, 38 Bath Street, Glasgow	
1872		Sibbald, John, M.D., Commissioner in Lunacy, 3 St Margaret's Road, Whitehouse Loan	
1870		* Sime, James, M.A., South Park, Fountainhall Road	
1871		* Simpson, A. R., M.D., F.R.C.P.E., Professor of Midwifery in the University of Edinburgh, 52 Queen Street	400
1888		* Sinclair, D. S., 328 Renfrew Street, Glasgow	
1859	P.	Skene, W. F., W.S., LL.D., D.C.L., Historiographer-Royal for Scotland, 27 Inverleith Row	
1876		* Skinner, William, W.S., Town-Clerk of Edinburgh, 35 George Square	
1868		* Smith, Adam Gillies, C.A. (TREASURER), 64 Princes Street	
1882	P.	Smith, C. Michie, B.Sc., Professor of Physical Science, Christian College, Madras, India	405
1885		* Smith, George, F.C.S., Polmont Station	
1883		Smith, James Greig, M.A., M.B., 16 Victoria Square, Clifton	
1871		* Smith, John, M.D., F.R.C.S.E., LL.D., President of the Medico-Chirurgical Society, 11 Wemyss Place	
1886		* Smith, Major-General Sir R. Murdoch, K.C.M.G., R.E., Director of Museum of Science and Art, Edinburgh	
1871	P.	* Smith, Rev. W. Robertson, M.A., LL.D., Professor of Arabic in the Univ. of Cambridge	410
		Smith, William Robert, M.D., D.Sc., Barrister-at-Law, Professor of Forensic Medicine in King's College, 74 Great Russell Street, Bloomsbury Square, London	
1880			
1846	K.B. P.	Smyth, Piazzi, LL.D., Ex-Astronomer-Royal for Scotland, and Emeritus Professor of Astronomy in the University of Edinburgh, Clova, Ripon	
1880		Sollas, W. J., M.A., D.Sc., F.R.S., late Fellow of St John's College, Cambridge, and Professor of Geology and Mineralogy in the University of Dublin, Talbot House, Merrion Avenue, Blackrock, County Dublin	
1889		* Somerville, William, Dr Oec., B.Sc., of Comiston, Lecturer on Forestry in the University of Edinburgh, 1 Braid Crescent	
1882		* Sorley, James, F.F.A., C.A., 18 Magdala Crescent	415
1874	P.	* Sprague, T. B., M.A., Actuary, 29 Buckingham Terrace	
1850	P.	Stark, James, M.D., F.R.C.P.E., of Huntfield, Underwood, Bridge of Allan	
1885		* Steggall, J. E. A., Prof. of Mathematics and Natural Phil. in University College, Dundee	
1886		* Stevenson, C. A., B.Sc., Assoc. Memb. Inst. C.E., 45 Melville Street	
1884		* Stevenson, David Alan, B.Sc., Memb. Inst. C.E., 45 Melville Street	420
1877		* Stevenson, James, F.R.G.S., 4 Woodside Crescent, Glasgow	
1888		* Stevenson, Rev. John, LL.D., Minister of Glamis, Forfarshire	
1868		Stevenson, John J., 4 Porchester Gardens, London	
1888		* Stewart, Charles Hunter, M.B., B.Sc., 2 Bellevue Terrace	
1868		Stewart, Major-General J. H. M. Shaw, R.E., F.R.G.S., 61 Lancaster Gate, London, W.	425
1878		* Stewart, James R., M.A., 10 Salisbury Road	
1866		* Stewart, T. Grainger, M.D., F.R.C.P.E., Professor of the Practice of Physic in the University of Edinburgh, 19 Charlotte Square	
1873		* Stewart, Walter, 22 Torphichen Street	
1848		Stirling, Patrick J., LL.D., Kippendavie House, Dunblane	
1877		* Stirling, William, D.Sc., M.D., Brackenbury Professor of Physiology and Histology in Owens College and Victoria University, Manchester	430
1889		* Stockman, Ralph, M.D., F.R.C.P.E., 5 Bellevue Crescent	
1823		Stuart, Captain T. D., H.M.I.S.	

ALPHABETICAL LIST OF THE ORDINARY FELLOWS OF THE SOCIETY. 215

Date of Election.			
1870		* Swan, Patrick Don, Ex-Provost of Kirkcaldy	
1848	P.	Swan, Wm., LL.D., Emeritus Professor of Natural Philosophy in the University of St Andrews, Ardchapel, Helensburgh	
1844		Swinton, A. Campbell, of Kimmerghame, LL.D., Duns	435
1875		* Syme, James, 9 Drumsheugh Gardens	
1885		* Symington, Johnson, M.D., F.R.C.S.E., 2 Greenhill Park	
1872		Tait, the Very Rev. A., D.D., LL.D., Provost of Tuam, Moylough Rectory, County Galway, Ireland	
1861	K.P.	Tait, P. Guthrie, M.A., Professor of Natural Philosophy in the University of Edinburgh (GENERAL SECRETARY), 38 George Square	
1870		* Tatlock, Robert R., City Analyst's Office, 156 Bath Street, Glasgow	440
1872		* Teape, Rev. Charles R., M.A., Ph.D., 15 Findhorn Place	
1885		* Thompson, D'Arcy W., Professor of Natural History in University College, Dundee	
1884		* Thoms, George Hunter, of Aberlemno, Advocate, Sheriff of the Counties of Orkney and Zetland, 13 Charlotte Square	
1870		* Thomson, Rev. Andrew, D.D., 63 Northumberland Street	
1887		* Thomson, Andrew, M.A., D.Sc., Assistant to the Professor of Chemistry in the University College, Dundee, 10 Comly Bank, Bridge End, Perth	445
1875	P.	* Thomson, James, LL.D., F.R.S., 2 Florentine Gardens, Hillhead, Glasgow	
1887	P.	* Thomson, J. Arthur, M.A., Lect. on Zoology, School of Medicine, Edin., 30 Royal Circus	
1880		Thomson, John Millar, King's College, London	
1863		Thomson, Murray, M.D., Professor of Chemistry, Thomason College, Roorkee, India, 22 Victoria Road, Gipsy Hill, London, S.E.	
1870		* Thomson, Spencer C., Actuary, 10 Eglinton Crescent	450
1847	V.J. K.P.	Thomson, Sir William, LL.D., D.C.L., F.R.S. (PRESIDENT), Foreign Associate of the Institute of France, Regius Professor of Natural Philosophy in the University of Glasgow, Grand Officer of the Legion of Honour of France, and Member of the Prussian Order <i>Pour le Mérite</i>	
1882		Thomson, Wm., M.A., B.Sc., Professor of Mathematics, Victoria College, Stellenbosch, Cape Colony	
1870		* Thomson, Wm. Burns, F.R.C.P.E., F.R.C.S.E., 112 Newington Green Road, London	
1876		Thomson, William, Royal Institution, Manchester	
1878		Thorburn, Robert Macfie, Uddevalla, Sweden	455
1874	N.P.	* Traquair, R. H., M.D., F.R.S., F.G.S., Keeper of the Natural History Collections in the Museum of Science and Art, Edinburgh, 8 Dean Park Crescent	
1874		* Tuke, J. Batty, M.D., F.R.C.P.E., 20 Charlotte Square	
1888		* Turnbull, Andrew H., Actuary, The Elms, Whitehouse Loan	
1879		* Turnbull, John, of Abbey St Bathans, W.S., 49 George Square	
1861	N.P.	Turner, Sir William, M.B., LL.D., F.R.C.S.E., F.R.S., Professor of Anatomy in the University of Edinburgh, and President of the Royal Physical Society (SECRETARY), 6 Eton Terrace	460
1877		* Underhill, Charles E., B.A., M.B., F.R.C.P.E., F.R.C.S.E., 8 Coates Crescent	
1889		Underhill, T. Edgar, M.D., F.R.C.S.E., Broomsgrove, Worcestershire	
1875		Vincent, Charles Wilson, F.I.C., F.C.S., M.R.I., Librarian of the Reform Club, Pall Mall, and Royal Institution, Albemarle Street, London	

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Date of Election.			
1888		Walker, James, Memb. Inst. C.E., Engineer's Office, Harbour Works, Douglas, Isle of Man	
1873		* Walker, Robert, M.A., University, Aberdeen	465
1886		* Wallace, Robert, Prof. of Agriculture and Rural Economy in the University of Edinb.	
1883		* Watson, Charles, Redhall, Slateford	
1870		* Watson, James, C.A., 45 Charlotte Square	
1866		* Watson, John K., 14 Blackford Road	
1866		* Watson, Patrick Heron, M.D., F.R.C.S.E., LL.D., 16 Charlotte Square	470
1862	P.	Watson, Rev. Robert Boog, B.A., Free Church Manse, Cardross, Dumbartonshire	
1887		* Webster, H. A., Librarian to University of Edinburgh, 7 Duddingstone Park, Portobello	
1873		Welsh, David, Major-General, R.A., 1 Barton Terrace, Dawlish	
1882		* Wenley, James A., Treasurer of the Bank of Scotland, 5 Drumsheugh Gardens	
1887		* White, Arthur Silva, Secretary to the Royal Scottish Geographical Society, 22 Duke St.	475
1881		Whitehead, Walter, F.R.C.S.E., 202 Oxford Road, Manchester	
1883		Wickham, R. H. B., M.D., F.R.C.S.E., Medical Superintendent, City and County Lunatic Asylum, Newcastle-on-Tyne, Dawlish, South Devon	
1887		* Wieland, G. B., Whitehill, Rosewell, Mid-Lothian	
1879		* Will, John Charles Ogilvie, M.D., 305 Union Street, Aberdeen	
1868		* Williams, W., Principal and Professor of Veterinary Medicine and Surgery, New Veterinary College, Leith Walk	480
1888		* Williamson, George, F.A.S. Scot., 37 Newton Street, Finnart, Greenock	
1879		* Wilson, Andrew, Ph.D., Lecturer on Zoology and Comparative Anatomy in the Edinburgh Medical School, 118 Gilmore Place	
1878		* Wilson, Rev. John, M.A., 27 Buccleuch Place	
1875		Wilson, Sir Daniel, LL.D., President of the University of Toronto, and Professor of English Literature in that University	
1882		Wilson, George, M.A., M.D., 23 Claremont Road, Leamington	485
1834		Wilson, Isaac, M.D.	
1889		Wilson, Robert, Memb. Inst. C.E., St Stephen's Club, and 7 Westminster Chambers, Victoria Street, London	
1870		Winzer, John, Chief Surveyor, Civil Service, Ceylon, 7 Dryden Place, Newington	
1881		* Wise, Thos. Alex., M.D., F.R.C.P.E., F.R.A.S., Thornton, the Beulah, Upper Norwood	
1886		* Woodhead, German Sims, M.D., F.R.C.P.E., 6 Marchhall Crescent	490
1884		Woods, G. A., M.R.C.S., Lansdowne, 36 Hoghton Street, Southport	
1864		Wyld, Robert S., LL.D., 19 Inverleith Row	
1887		* Yeo, John S., Carrington House, Fettes College	
1882		* Young, Andrew, F.G.S., 22 Elm Row	
1882		* Young, Frank W., F.C.S., Lecturer on Natural Science, High School, Dundee, Woodmuir Park, West Newport, Fife	495
1882		* Young, Thomas Graham, Westfield, West Calder	

LIST OF HONORARY FELLOWS

AT NOVEMBER 1889.

His Royal Highness The PRINCE OF WALES.

FOREIGNERS (LIMITED TO THIRTY-SIX BY LAW X.).

Elected

1884 Pierre J. van Beneden,	<i>Louvain.</i>
1889 Marcellin Pierre Eugène Berthelot,	<i>Paris.</i>
1864 Robert Wilhelm Bunsen,	<i>Heidelberg.</i>
1877 Alphonse de Candolle,	<i>Geneva.</i>
1883 Luigi Cremona,	<i>Rome.</i>
1889 Ernst Curtius,	<i>Berlin.</i>
1858 James D. Dana,	<i>New Haven, Conn.</i>
1877 Carl Gegenbaur,	<i>Heidelberg.</i>
1888 Ernst Haeckel,	<i>Jena.</i>
1883 Julius Hann,	<i>Vienna.</i>
1884 Charles Hermite,	<i>Paris.</i>
1864 Hermann Ludwig Ferdinand von Helmholtz,	<i>Berlin.</i>
1879 Jules Janssen,	<i>Paris.</i>
1875 August Kekulé,	<i>Bonn.</i>
1864 Albert Kölliker,	<i>Würzburg.</i>
1875 Ernst Eduard Kummer,	<i>Berlin.</i>
1876 Ferdinand de Lesseps,	<i>Paris.</i>
1864 Rudolph Leuckart,	<i>Leipzig.</i>
1881 Sven Lovén,	<i>Stockholm.</i>
1889 James Russell Lowell,	<i>Cambridge, U.S.</i>
1888 Demetrius Ivanovich Mendeléef,	<i>St Petersburg.</i>
1886 Alphonse Milne-Edwards,	<i>Paris.</i>
1864 Theodore Mommsen,	<i>Berlin.</i>
1881 Simon Newcomb,	<i>Washington.</i>
1886 H. A. Newton,	<i>Yale College.</i>
1874 Louis Pasteur,	<i>Paris.</i>
1886 Alphonse Renard,	<i>Gand.</i>
1889 Georg Hermann Quincke,	<i>Heidelberg.</i>
1881 Johannes Iapetus Smith Steenstrup,	<i>Copenhagen.</i>
1878 Otto Wilhelm Struve,	<i>Pulkowa.</i>
1886 Tobias Robert Thalén,	<i>Upsala.</i>
1874 Otto Torell,	<i>Lund.</i>
1868 Rudolph Virchow,	<i>Berlin.</i>
1874 Wilhelm Eduard Weber,	<i>Göttingen.</i>

Total, 34.

BRITISH SUBJECTS (LIMITED TO TWENTY BY LAW X.)

Elected.

1849 John Couch Adams, LL.D., F.R.S., Corresp. Mem. Inst. of France,	<i>Cambridge.</i>
1835 Sir George Biddell Airy, K.C.B., LL.D., D.C.L., F.R.S., Foreign Associate Inst. of France,	<i>Greenwich.</i>
1889 Ball, Sir Robert Stawell, Kt., LL.D., M.R.I.A., Professor of Astronomy in the University of Dublin, and Royal Astronomer for Ireland,	<i>Dublin.</i>
1865 Arthur Cayley, LL.D., D.C.L., F.R.S., Corresp. Memb. Inst. of France,	<i>Cambridge.</i>
1884 Edward Frankland, D.C.L., LL.D., F.R.S., Corresp. Mem. Inst. of France,	<i>London.</i>
1874 John Anthony Froude, LL.D.,	<i>London.</i>
1881 The Hon. Justice Sir William Robert Grove, LL.D., D.C.L., F.R.S.,	<i>London.</i>
1883 Sir Joseph Dalton Hooker, K.C.S.I., M.D., LL.D., D.C.L., F.R.S., Corresp. Mem. Inst. of France,	<i>London.</i>
1884 William Huggins, LL.D., D.C.L., F.R.S., Corresp. Mem. Inst. of France,	<i>London.</i>
1876 Thomas Henry Huxley, LL.D., D.C.L., F.R.S., Corresp. Mem. Inst. of France,	<i>London.</i>
1845 Sir Richard Owen, K.C.B., M.D., LL.D., D.C.L., F.R.S., Foreign Associate Inst. of France,	<i>London.</i>
1886 The Lord Rayleigh, D.C.L., LL.D., Sec. R.S.,	<i>London.</i>
1881 The Rev. George Salmon, D.D., LL.D., D.C.L., F.R.S., Corresp. Mem. Inst. of France,	<i>Dublin.</i>
1884 J. S. Burdon Sanderson, M.D., LL.D., F.R.S.,	<i>Oxford.</i>
1864 Sir George Gabriel Stokes, Bart., M.P., LL.D., D.C.L., Pres. R.S., Corresp. Mem. Inst. of France,	<i>Cambridge.</i>
1874 James Joseph Sylvester, LL.D., F.R.S., Corresp. Mem. Inst. of France,	<i>Oxford.</i>
1864 The Right Hon. Lord Tennyson, D.C.L., LL.D., F.R.S., Poet Laureate,	<i>Isle of Wight.</i>
1883 Alexander William Williamson, LL.D., F.R.S., Corresp. Mem. Inst. of France,	<i>London.</i>
1883 Colonel Henry Yule, C.B., LL.D.,	<i>London.</i>

Total, 19.

L A W S.

[By the Charter of the Society (printed in the *Transactions*, Vol. VI. p. 5), the Laws cannot be altered, except at a Meeting held one month after that at which the Motion for alteration shall have been proposed.]

I.

THE ROYAL SOCIETY OF EDINBURGH shall consist of Ordinary and Honorary Fellows. Title.

II.

Every Ordinary Fellow, within three months after his election, shall pay Two Guineas as the fee of admission, and Three Guineas as his contribution for the Session in which he has been elected; and annually at the commencement of every Session, Three Guineas into the hands of the Treasurer. This annual contribution shall continue for ten years after his admission, and it shall be limited to Two Guineas for fifteen years thereafter.* The fees of Ordinary Fellows residing in Scotland.

III.

All Fellows who shall have paid Twenty-five years' annual contribution shall be exempted from further payment. Payment to cease after 25 years.

IV.

The fees of admission of an Ordinary Non-Resident Fellow shall be £26, 5s., payable on his admission; and in case of any Non-Resident Fellow coming to reside at any time in Scotland, he shall, during each year of his residence, pay the usual annual contribution of £3, 3s., payable by each Resident Fellow; but after payment of such annual contribution for eight years, he shall be exempt Fees of Non-Resident Ordinary Fellows.

* A modification of this rule, in certain cases, was agreed to at a Meeting of the Society held on the 3rd January 1831.

At the Meeting of the Society, on the 5th January 1857, when the reduction of the Contributions from £3, 3s. to £2, 2s., from the 11th to the 25th year of membership, was adopted, it was resolved that the existing Members shall share in this reduction, so far as regards their future annual Contributions.

Case of Fellows
becoming Non-
Resident.

from any further payment. In the case of any Resident Fellow ceasing to reside in Scotland, and wishing to continue a Fellow of the Society, it shall be in the power of the Council to determine on what terms, in the circumstances of each case, the privilege of remaining a Fellow of the Society shall be continued to such Fellow while out of Scotland.

V.

Defaulters.

Members failing to pay their contributions for three successive years (due application having been made to them by the Treasurer) shall be reported to the Council, and, if they see fit, shall be declared from that period to be no longer Fellows, and the legal means for recovering such arrears shall be employed.

VI.

Privileges of
Ordinary Fellows.

None but Ordinary Fellows shall bear any office in the Society, or vote in the choice of Fellows or Office-Bearers, or interfere in the patrimonial interests of the Society.

VII.

Numbers Un-
limited.

The number of Ordinary Fellows shall be unlimited.

VIII.

Fellows entitled to
Transactions.

The Ordinary Fellows, upon producing an order from the TREASURER, shall be entitled to receive from the Publisher, gratis, the Parts of the Society's Transactions which shall be published subsequent to their admission.

IX.

Mode of Recom-
mending Ordinary
Fellows.

Candidates for admission as Ordinary Fellows shall make an application in writing, and shall produce along with it a certificate of recommendation to the purport below,* signed by at least *four* Ordinary Fellows, two of whom shall certify their recommendation from personal knowledge. This recommendation shall be delivered to the Secretary, and by him laid before the Council, and shall afterwards be printed in the circulars for three Ordinary Meetings of the Society, previous to the day of election, and shall lie upon the table during that time.

* "A. B., a gentleman well versed in Science (*or Polite Literature, as the case may be*), being "to our knowledge desirous of becoming a Fellow of the Royal Society of Edinburgh, we hereby "recommend him as deserving of that honour, and as likely to prove a useful and valuable Member."

X.

Honorary Fellows shall not be subject to any contribution. This class shall consist of persons eminently distinguished for science or literature. Its number shall not exceed Fifty-six, of whom Twenty may be British subjects, and Thirty-six may be subjects of foreign states.

Honorary Fellows,
British and
Foreign.

XI.

Personages of Royal Blood may be elected Honorary Fellows, without regard to the limitation of numbers specified in Law X.

Royal Personages.

XII.

Honorary Fellows may be proposed by the Council, or by a recommendation (in the form given below*) subscribed by three Ordinary Fellows; and in case the Council shall decline to bring this recommendation before the Society, it shall be competent for the proposers to bring the same before a General Meeting. The election shall be by ballot, after the proposal has been communicated *viva voce* from the Chair at one meeting, and printed in the circulars for two ordinary meetings of the Society, previous to the day of election.

Recommendation
of Honorary
Fellows.

Mode of Election.

XIII.

The election of Ordinary Fellows shall only take place at the first Ordinary Meeting of each month during the Session. The election shall be by ballot, and shall be determined by a majority of at least two-thirds of the votes, provided Twenty-four Fellows be present and vote.

Election of Ordinary
Fellows.

XIV.

The Ordinary Meetings shall be held on the first and third Mondays of every month from December to July inclusively; excepting when there are five Mondays in January, in which case the Meetings for that month shall be held on its third and fifth Mondays. Regular Minutes shall be kept of the proceedings, and the Secretaries shall do the duty alternately, or according to such agreement as they may find it convenient to make.

Ordinary Meetings.

* We hereby recommend _____
for the distinction of being made an Honorary Fellow of this Society, declaring that each of us from our own knowledge of his services to (*Literature or Science, as the case may be*) believe him to be worthy of that honour.

(To be signed by three Ordinary Fellows.)

To the President and Council of the Royal Society
of Edinburgh.

XV.

The Transactions.

The Society shall from time to time publish its Transactions and Proceedings. For this purpose the Council shall select and arrange the papers which they shall deem it expedient to publish in the *Transactions* of the Society, and shall superintend the printing of the same.

The Council shall have power to regulate the private business of the Society. At any Meeting of the Council the Chairman shall have a casting as well as a deliberative vote.

XVI.

How Published.

The Transactions shall be published in parts or *Fasciculi* at the close of each Session, and the expense shall be defrayed by the Society.

XVII.

The Council.

That there shall be formed a Council, consisting—First, of such gentlemen as may have filled the office of President; and Secondly, of the following to be annually elected, viz.:—a President, Six Vice-Presidents (two at least of whom shall be resident), Twelve Ordinary Fellows as Councillors, a General Secretary, Two Secretaries to the Ordinary Meetings, a Treasurer, and a Curator of the Museum and Library.

XVIII.

Retiring Councillors.

Four Councillors shall go out annually, to be taken according to the order in which they stand on the list of the Council.

XIX.

Election of Office-Bearers.

An Extraordinary Meeting for the Election of Office-Bearers shall be held on the fourth Monday of November annually.

XX.

Special Meetings;
how called.

Special Meetings of the Society may be called by the Secretary, by direction of the Council; or on a requisition signed by six or more Ordinary Fellows. Notice of not less than two days must be given of such Meetings.

XXI.

Treasurer's Duties.

The Treasurer shall receive and disburse the money belonging to the Society, granting the necessary receipts, and collecting the money when due.

He shall keep regular accounts of all the cash received and expended, which shall be made up and balanced annually; and at the Extraordinary Meeting in November, he shall present the accounts for the preceding year, duly audited.

At this Meeting, the Treasurer shall also lay before the Council a list of all arrears due above two years, and the Council shall thereupon give such directions as they may deem necessary for recovery thereof.

XXII.

At the Extraordinary Meeting in November, a professional accountant shall be chosen to audit the Treasurer's accounts for that year, and to give the necessary discharge of his intromissions. Auditor.

XXIII.

The General Secretary shall keep Minutes of the Extraordinary Meetings of the Society, and of the Meetings of the Council, in two distinct books. He shall, under the direction of the Council, conduct the correspondence of the Society, and superintend its publications. For these purposes he shall, when necessary, employ a clerk, to be paid by the Society. General Secretary's Duties.

XXIV.

The Secretaries to the Ordinary Meetings shall keep a regular Minute-book, in which a full account of the proceedings of these Meetings shall be entered; they shall specify all the Donations received, and furnish a list of them, and of the Donors' names, to the Curator of the Library and Museum; they shall likewise furnish the Treasurer with notes of all admissions of Ordinary Fellows. They shall assist the General Secretary in superintending the publications, and in his absence shall take his duty. Secretaries to Ordinary Meetings.

XXV.

The Curator of the Museum and Library shall have the custody and charge of all the Books, Manuscripts, objects of Natural History, Scientific Productions, and other articles of a similar description belonging to the Society; he shall take an account of these when received, and keep a regular catalogue of the whole, which shall lie in the Hall, for the inspection of the Fellows. Curator of Museum and Library.

XXVI.

All Articles of the above description shall be open to the inspection of the Fellows at the Hall of the Society, at such times and under such regulations, as the Council from time to time shall appoint. Use of Museum and Library.

XXVII.

A Register shall be kept, in which the names of the Fellows shall be enrolled at their admission, with the date. Register Book.

THE KEITH, MAKDOUGALL-BRISBANE, NEILL, AND VICTORIA JUBILEE PRIZES.

I. KEITH PRIZE.

The KEITH PRIZE, consisting of a Gold Medal and from £40 to £50 in Money, is awarded for the "best communication on a scientific subject, communicated, in the first instance, to the Royal Society." Preference given to a paper containing a discovery.

- 1ST BIENNIAL PERIOD, 1827-29.—Dr BREWSTER, for his papers "on his Discovery of Two New Immiscible Fluids in the Cavities of certain Minerals," published in the Transactions of the Society.
- 2ND BIENNIAL PERIOD, 1829-31.—Dr BREWSTER, for his paper "on a New Analysis of Solar Light," published in the Transactions of the Society.
- 3RD BIENNIAL PERIOD, 1831-33.—THOMAS GRAHAM, Esq., for his paper "on the Law of the Diffusion of Gases," published in the Transactions of the Society.
- 4TH BIENNIAL PERIOD, 1833-35.—Professor J. D. FORBES, for his paper "on the Refraction and Polarization of Heat," published in the Transactions of the Society.
- 5TH BIENNIAL PERIOD, 1835-37.—JOHN SCOTT RUSSELL, Esq., for his Researches "on Hydrodynamics," published in the Transactions of the Society.
- 6TH BIENNIAL PERIOD, 1837-39.—Mr JOHN SHAW, for his experiments "on the Development and Growth of the Salmon," published in the Transactions of the Society.
- 7TH BIENNIAL PERIOD, 1839-41.—Not awarded.
- 8TH BIENNIAL PERIOD, 1841-43.—Professor JAMES DAVID FORBES, for his papers "on Glaciers," published in the Proceedings of the Society.
- 9TH BIENNIAL PERIOD, 1843-45.—Not awarded.
- 10TH BIENNIAL PERIOD, 1845-47.—General Sir THOMAS BRISBANE, Bart., for the Makerstoun Observations on Magnetic Phenomena, made at his expense, and published in the Transactions of the Society.
- 11TH BIENNIAL PERIOD, 1847-49.—Not awarded.
- 12TH BIENNIAL PERIOD, 1849-51.—Professor KELLAND, for his papers "on General Differentiation, including his more recent communication on a process of the Differential Calculus, and its application to the solution of certain Differential Equations," published in the Transactions of the Society.
- 13TH BIENNIAL PERIOD, 1851-53.—W. J. MACQUORN RANKINE, Esq., for his series of papers "on the Mechanical Action of Heat," published in the Transactions of the Society.
- 14TH BIENNIAL PERIOD, 1853-55.—Dr THOMAS ANDERSON, for his papers "on the Crystalline Constituents of Opium, and on the Products of the Destructive Distillation of Animal Substances," published in the Transactions of the Society.

APPENDIX—KEITH, BRISBANE, NEILL, AND VICTORIA JUBILEE PRIZES. 225

- 15TH BIENNIAL PERIOD, 1855-57.—Professor BOOLE, for his Memoir "on the Application of the Theory of Probabilities to Questions of the Combination of Testimonies and Judgments," published in the Transactions of the Society.
- 16TH BIENNIAL PERIOD, 1857-59.—Not awarded.
- 17TH BIENNIAL PERIOD, 1859-61.—JOHN ALLAN BROWN, Esq., F.R.S., Director of the Trevandrum Observatory, for his papers "on the Horizontal Force of the Earth's Magnetism, on the Correction of the Bifilar Magnetometer, and on Terrestrial Magnetism generally," published in the Transactions of the Society.
- 18TH BIENNIAL PERIOD, 1861-63.—Professor WILLIAM THOMSON, of the University of Glasgow, for his Communication "on some Kinematical and Dynamical Theorems."
- 19TH BIENNIAL PERIOD, 1863-65.—Principal FORBES, St Andrews, for his "Experimental Inquiry into the Laws of Conduction of Heat in Iron Bars," published in the Transactions of the Society.
- 20TH BIENNIAL PERIOD, 1865-67.—Professor C. PIAZZI SMYTH, for his paper "on Recent Measures at the Great Pyramid," published in the Transactions of the Society.
- 21ST BIENNIAL PERIOD, 1867-69.—Professor P. G. TAIT, for his paper "on the Rotation of a Rigid Body about a Fixed Point," published in the Transactions of the Society.
- 22ND BIENNIAL PERIOD, 1869-71.—Professor CLERK MAXWELL, for his paper "on Figures, Frames, and Diagrams of Forces," published in the Transactions of the Society.
- 23RD BIENNIAL PERIOD, 1871-73.—Professor P. G. TAIT, for his paper entitled "First Approximation to a Thermo-electric Diagram," published in the Transactions of the Society.
- 24TH BIENNIAL PERIOD, 1873-75.—Professor CRUM BROWN, for his Researches "on the Sense of Rotation, and on the Anatomical Relations of the Semicircular Canals of the Internal Ear."
- 25TH BIENNIAL PERIOD, 1875-77.—Professor M. FORSTER HEDDLE, for his papers "on the Rhombohedral Carbonates," and "on the Felspars of Scotland," published in the Transactions of the Society.
- 26TH BIENNIAL PERIOD, 1877-79.—Professor H. C. FLEEMING JENKIN, for his paper "on the Application of Graphic Methods to the Determination of the Efficiency of Machinery," published in the Transactions of the Society; Part II. having appeared in the volume for 1877-78.
- 27TH BIENNIAL PERIOD, 1879-81.—Professor GEORGE CHRYSTAL, for his paper "on the Differential Telephone," published in the Transactions of the Society.
- 28TH BIENNIAL PERIOD, 1881-83.—THOMAS MUIR, Esq., LL.D., for his "Researches into the Theory of Determinants and Continued Fractions," published in the Proceedings of the Society.
- 29TH BIENNIAL PERIOD, 1883-85.—JOHN AITKEN, Esq., for his paper "on the Formation of Small Clear Spaces in Dusty Air," and for previous papers on Atmospheric Phenomena, published in the Transactions of the Society.
- 30TH BIENNIAL PERIOD, 1885-87.—JOHN MURRAY, Esq., for a series of communications, extending over several years, on subjects connected with Ocean Circulation, Compressibility of Glass, &c.; two of which, viz., "On Ice and Brines," and "On the Distribution of Temperature in the Antarctic Ocean," have been published in the Proceedings of the Society.

II. MAKDOUGALL-BRISBANE PRIZE.

This Prize is to be awarded biennially by the Council of the Royal Society of Edinburgh to such person, for such purposes, for such objects, and in such manner as shall appear to them the most conducive to the promotion of the interests of science; with the *proviso* that the Council shall not be compelled to award the Prize unless there shall be some individual engaged in scientific pursuit, or some paper written on a scientific subject, or some discovery in science made during the biennial period, of sufficient merit or importance in the opinion of the Council to be entitled to the Prize.

1ST BIENNIAL PERIOD, 1859.—SIR RODERICK IMPEY MURCHISON, on account of his Contributions to the Geology of Scotland.

2ND BIENNIAL PERIOD, 1860-62.—WILLIAM SELLER, M.D., F.R.C.P.E., for his "Memoir of the Life and Writings of Dr Robert Whytt," published in the Transactions of the Society.

3RD BIENNIAL PERIOD, 1862-64.—JOHN DENIS MACDONALD, Esq., R.N., F.R.S., Surgeon of H.M.S. "Icarus," for his paper "on the Representative Relationships of the Fixed and Free Tunicata, regarded as Two Sub-classes of equivalent value; with some General Remarks on their Morphology," published in the Transactions of the Society.

4TH BIENNIAL PERIOD, 1864-66.—Not awarded.

5TH BIENNIAL PERIOD, 1866-68.—DR ALEXANDER CRUM BROWN and DR THOMAS RICHARD FRASER, for their conjoint paper "on the Connection between Chemical Constitution and Physiological Action," published in the Transactions of the Society.

6TH BIENNIAL PERIOD, 1868-70.—Not awarded.

7TH BIENNIAL PERIOD, 1870-72.—GEORGE JAMES ALLMAN, M.D., F.R.S., Emeritus Professor of Natural History, for his paper "on the Homological Relations of the Coelenterata," published in the Transactions, which forms a leading chapter of his Monograph of Gymnoblatic or Tubularian Hydroids—since published.

8TH BIENNIAL PERIOD, 1872-74.—PROFESSOR LISTER, for his paper "on the Germ Theory of Putrefaction and the Fermentive Changes," communicated to the Society, 7th April 1873.

9TH BIENNIAL PERIOD, 1874-76.—ALEXANDER BUCHAN, A.M., for his paper "on the Diurnal Oscillation of the Barometer," published in the Transactions of the Society.

10TH BIENNIAL PERIOD, 1876-78.—PROFESSOR ARCHIBALD GEIKIE, for his paper "on the Old Red Sandstone of Western Europe," published in the Transactions of the Society.

11TH BIENNIAL PERIOD, 1878-80.—PROFESSOR PIAZZI SMYTH, Astronomer-Royal for Scotland, for his paper "on the Solar Spectrum in 1877-78, with some Practical Idea of its probable Temperature of Origination," published in the Transactions of the Society.

12TH BIENNIAL PERIOD, 1880-82.—PROFESSOR JAMES GEIKIE, for his "Contributions to the Geology of the North-West of Europe," including his paper "on the Geology of the Faroes," published in the Transactions of the Society.

APPENDIX—KEITH, BRISBANE, NEILL, AND VICTORIA JUBILEE PRIZES. 227

- 13TH BIENNIAL PERIOD, 1882-84.—EDWARD SANG, Esq., LL.D., for his paper "on the Need of Decimal Subdivisions in Astronomy and Navigation, and on Tables requisite therefor," and generally for his Recalculation of Logarithms both of Numbers and Trigonometrical Ratios, —the former communication being published in the Proceedings of the Society.
- 14TH BIENNIAL PERIOD, 1884-86.—JOHN MURRAY, Esq., LL.D., for his papers "On the Drainage Areas of Continents, and Ocean Deposits," "The Rainfall of the Globe, and Discharge of Rivers," "The Height of the Land and Depth of the Ocean," and "The Distribution of Temperature in the Scottish Lochs as affected by the Wind."
- 15TH BIENNIAL PERIOD, 1886-88.—ARCHIBALD GEIKIE, Esq., LL.D., for numerous communications, especially that entitled "History of Volcanic Action during the Tertiary Period in the British Isles," published in the Transactions of the Society.

III. NEILL PRIZE.

This is a bequest of the late Dr PATRICK NEILL of the sum of £500, for the purpose of "the interest thereof being applied in furnishing a Medal or other reward every second or third year to any distinguished Scottish Naturalist, according as such Medal or reward shall be voted by the Council of the said Society."

- 1ST TRIENNIAL PERIOD, 1856-59.—Dr W. LAUDER LINDSAY, for his paper "on the Spermatogones and Pycnides of Filamentous, Fruticulose, and Foliaceous Lichens," published in the Transactions of the Society.
- 2ND TRIENNIAL PERIOD, 1859-62.—ROBERT KAYE GREVILLE, LL.D., for his Contributions to Scottish Natural History, more especially in the department of Cryptogamic Botany, including his recent papers on Diatomaceæ.
- 3RD TRIENNIAL PERIOD, 1862-65.—ANDREW CROMBIE RAMSAY, F.R.S., Professor of Geology in the Government School of Mines, and Local Director of the Geological Survey of Great Britain, for his various works and Memoirs published during the last five years, in which he has applied the large experience acquired by him in the Direction of the arduous work of the Geographical Survey of Great Britain to the elucidation of important questions bearing on Geological Science.
- 4TH TRIENNIAL PERIOD, 1865-68.—Dr WILLIAM CARMICHAEL M'INTOSH, for his paper "on the Structure of the British Nemertean, and on some New British Annelids," published in the Transactions of the Society.
- 5TH TRIENNIAL PERIOD, 1868-71.—Professor WILLIAM TURNER, for his papers "on the great Finner Whale; and on the Gravid Uterus, and the Arrangement of the Foetal Membranes in the Cetacea," published in the Transactions of the Society.
- 6TH TRIENNIAL PERIOD, 1871-74.—CHARLES WILLIAM PEACH, for his Contributions to Scottish Zoology and Geology, and for his recent contributions to Fossil Botany.
- 7TH TRIENNIAL PERIOD, 1874-77.—Dr RAMSAY H. TRAQUAIR, for his paper "on the Structure and Affinities of *Tristichopterus alatus* (Egerton)," published in the Transactions of the Society, and also for his contributions to the Knowledge of the Structure of Recent and Fossil Fishes.

228 APPENDIX—KEITH, BRISBANE, NEILL, AND VICTORIA JUBILEE PRIZES.

8TH TRIENNIAL PERIOD, 1877-80.—JOHN MURRAY, for his paper "on the Structure and Origin of Coral Reefs and Islands," published (in abstract) in the Proceedings of the Society.

9TH TRIENNIAL PERIOD, 1880-83.—Professor HERDMAN, for his papers "on the Tunicata," published in the Proceedings and Transactions of the Society.

10TH TRIENNIAL PERIOD, 1883-86.—B. N. PEACH, Esq., for his Contributions to the Geology and Palaeontology of Scotland, published in the Transactions of the Society.

IV. VICTORIA JUBILEE PRIZE.

This Prize, founded in the year 1887 by Dr R. H. GUNNING, is to be awarded triennially by the Council of the Royal Society of Edinburgh, in recognition of original work in Physics, Chemistry, or pure or Applied Mathematics.

Evidence of such work may be afforded either by a Paper presented to the Society, or by a Paper or one of the above subjects, or some discovery in them elsewhere communicated or made, which the Council may consider to be deserving of the Prize.

The Prize is open to men of science resident in or connected with Scotland.

In accordance with the wish of the Donor, the Council of the Society may on fit occasions award the Prize for work of a definite kind to be undertaken during the three succeeding years by a scientific man of recognised ability.

1ST TRIENNIAL PERIOD, 1887-90.—Sir WILLIAM THOMSON, Pres. R.S.E., F.R.S., for a remarkable series of papers "on Hydrokinetics," especially on Waves and Vortices, which have been communicated to the Society.

